

TECHNOLOGY DEPT.

Chilton's **MOTOR AGE**

AUGUST 1954



This Issue:

Servicing Tubeless Tires

STEEL-VENT'S 2-WAY ACTION DOES

1

REDUCES CYLINDER WEAR

Extra Oil-Carrying Capacity puts more oil on cylinder walls in the wear zone.

2

CONTROLS OIL-PUMPING

Extra Oil-Draining Capacity lets excess oil drain back into the crankcase.

Two-Way oil control permits the right amount of oil to circulate the split-second it's needed to protect vital friction zones. The Steel-Vent is designed to meter a generous amount of lubrication up to the compression ring wear zone—holding wear to the absolute minimum.

Steel-Vent design also permits fast drainage of excess oil back to the crankcase. And they can't clog—with every stroke of the piston, Steel-Vents flush away carbon deposits. You'll never see a clogged Steel-Vent.

In hundreds of thousands of re-ring, re-bore and re-sleeve installations, Hastings Steel-Vent Piston Rings have proved they reduce cylinder wear and stop oil-pumping.



HASTINGS MANUFACTURING CO., HASTINGS, MICH. • Piston Rings, Casite, Caslube, Drout, Oil Filters, Spark

HASTINGS

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Regular or Chrome-Faced

REDUCE CYLINDER WEAR • CONTROL

PERMATEX TOON-OYL

—NATIONALLY
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The Saturday Evening
POST
April 3, 1954 - 47

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HARD TO BELIEVE!

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SCIENCE**
MECHANICS—AUTOS—HOMEOWNERS

**POPULAR
MECHANICS**
MAGAZINE

Another Big Permadox Promotion—

Triple-Action TOON-OYL—the oil additive that works 3 ways to increase power, tune-up engines. Used for years by shops all over the country for better engine tune-ups.

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Triple-Action
**PERMATEX
"TOON-OYL"**



The carbon gums and tars that form in your engine would make you sick too! These deposits make your engine sluggish—your horsepower balky. Knocks and slow starts are another sign that your engine is gumming up—losing power—wasting gas. Bring your engine back to peak performance with "triple-action" Permadox "Toon-Oyl".

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2. Toon-Oyl reduces friction by coating cleaned parts with a wear.
3. Toon-Oyl neutralizes acid action—a principal cause of engine

Get full power from your car. Add a quart of triple-action Permadox "Toon-Oyl" to your engine oil. You'll feel the difference in the first few miles you drive.

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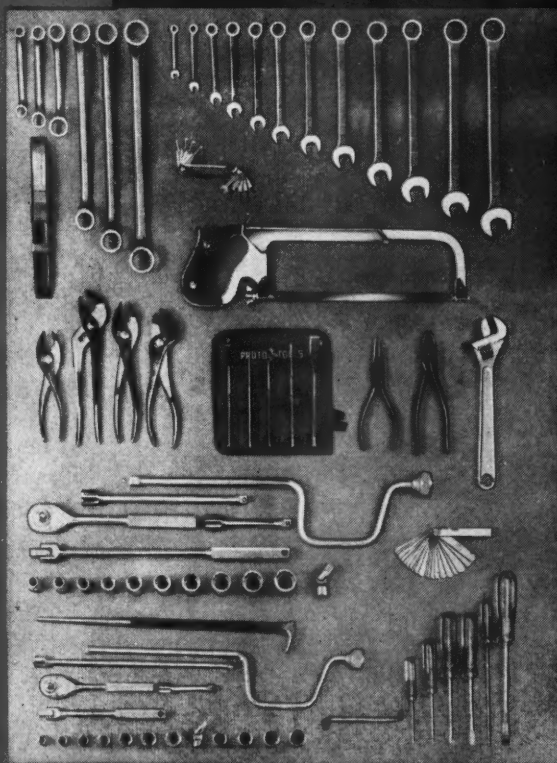
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about the Permadox
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Standard
Tool Set?



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Chilton's MOTOR AGE

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For THE AUTOMOTIVE SERVICE INDUSTRY

LXXIII, No. 9

August, 1954

In This Issue...

Newscoop	33
Report to Our Readers.....by Frank P. Tighe	37
News scene	38
Let's Take the Mystery Out of Tubeless Tires. by John K. Montgomery	42
Overheating Headaches	44
Safety Level in Power Steering Units.....by Ed Shea	46
New York to St. Louis—50 Years Ago.....By Richard C. Rittenhouse	48
Readers' Clearing House	50
New Products	52
Pop Gets the Facts	55
Flocking Adds a Finished Touch.....by Arthur H. Nellen, Jr.	56
Body Shop Tips	58
Price, Weight and Body Table	59
Engine Specifications	60
Bulletin Board	61
Cartoon Page	62
Shop Kinks	64
Calendar of Coming Events	130
Advertisers' Index	144
Last Laugh	146

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of Audit Bureau of Circulation.

MOTOR AGE, Vol. LXXIII, No. 9. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second Class Matter December 27, 1935,
at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price:
United States, United States Possessions, \$3.00 per year. Canadian \$5.00; foreign \$7.00 per year; single copies, 40 cents.

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Hudson dealers are backed by a powerful new force. American Motors offers leadership that

pioneered the industry; yet it is young, and determined to out-think, out-engineer and out-value competition.

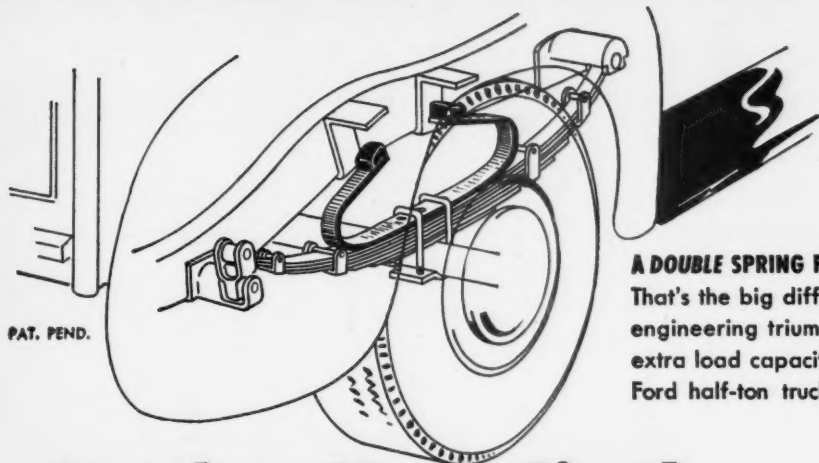
New merchandising plans have already increased dealers' sales. Never in the past two decades have there been such ground-floor opportunities.

They may be yours! Contact: C. A. J. Hadley, Sales Manager, Hudson Division, American Motors, Detroit 32, Michigan.



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...revolutionary, new low-cost overload helper spring for pick-up trucks and passenger cars.

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53-54	Ford 1/2 Ton	1500	XL 200
54	Dodge 1/2 Ton	1500	XL 600

Other listings available soon. See your Moog Jobber or write us for overload Catalog OV-13.

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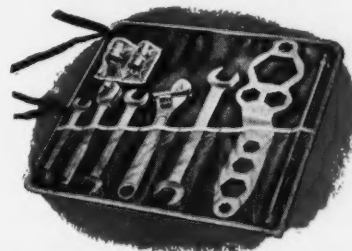
PUTS YOU A STEP AHEAD

Selling

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WIX PROVIDES COMPLETE COVERAGE IN OIL FILTER CARTRIDGES—PLUS THE TOOLS TO SELL THEM!

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WIX FILTER IDENTIFICATION CHARTS PICTURE AND DESCRIBE ALL POPULAR FILTER MAKES AND MODELS.

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AC FM-9 Service with WIX PC-127	AC L-1 Service with WIX PC-1-A	AC P-10 Service with WIX PC-127	AC L-8 Service with WIX PC-127
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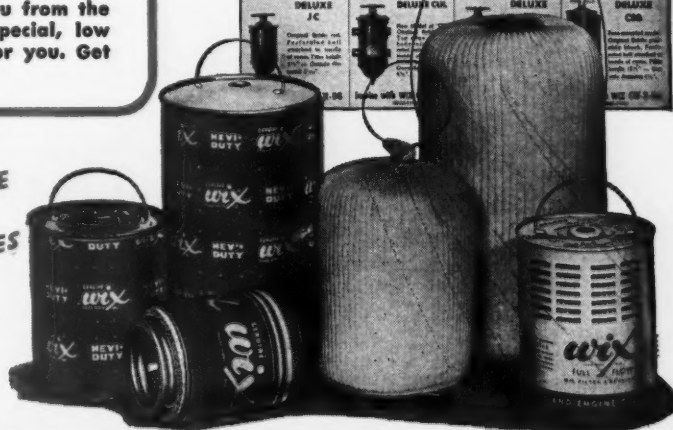


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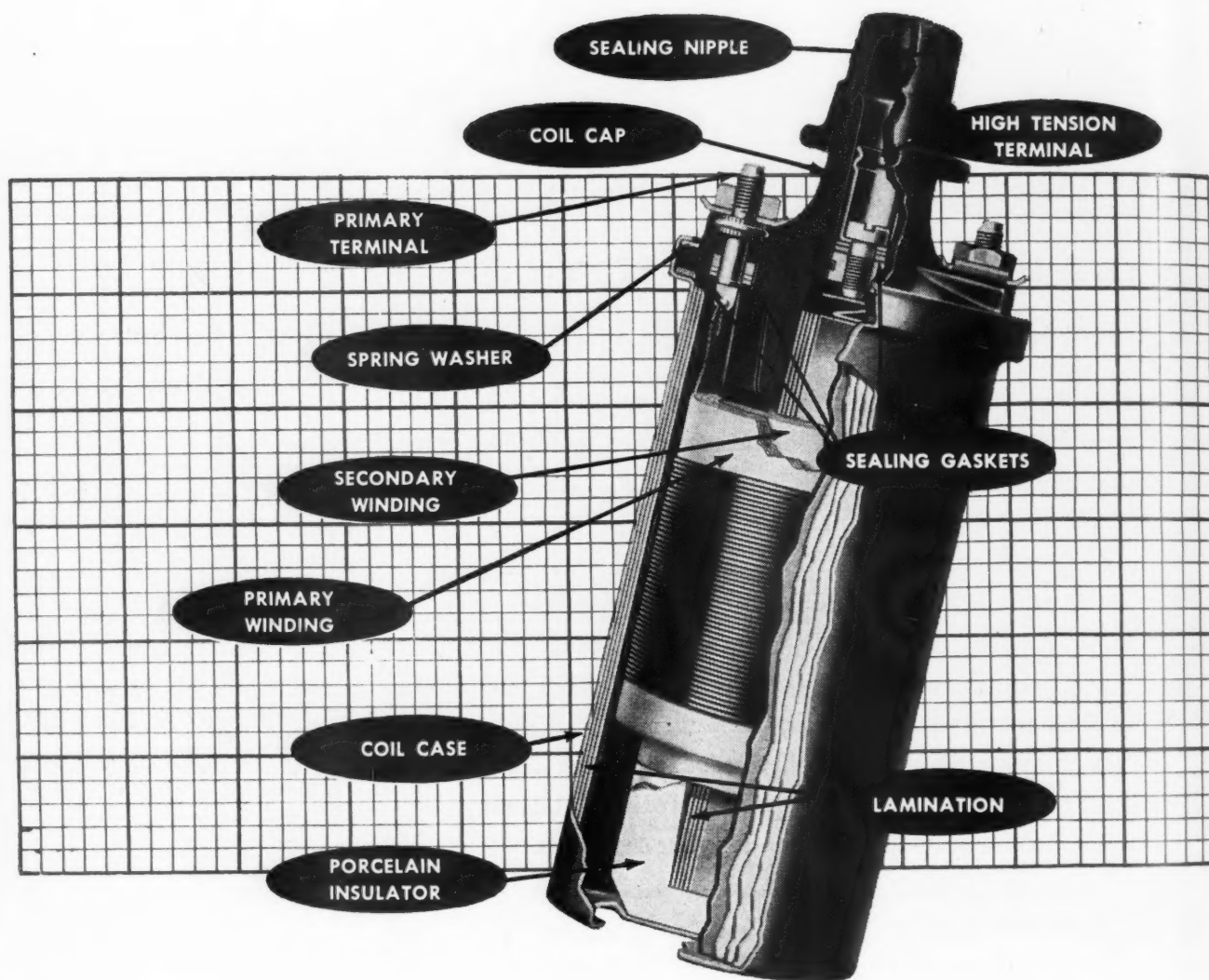
WIX GIVES ME COMPLETE COVERAGE TO SERVICE EVERY CAR THAT COMES INTO THE SHOP!



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Delco-Remy oil-filled service coils have everything it takes to deliver top performance on the job. They're better eight ways . . . the *right* replacements for the Delco-Remy original equipment coils on *millions* of cars.

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DISTRIBUTED BY WHOLESALERS EVERYWHERE

WHEREVER WHEELS TURN OR PROPELLERS SPIN

on the Job

LS RIGHT FOR THE JOB! BETTER EIGHT WAYS!

1

Balanced windings for maximum performance at all speeds and longer contact-point life.

2

Hermetically sealed against entrance of moisture and air under all conditions of service.

3

Oil-filled for permanent insulation and better heat dissipation.

4

Leakproof one-piece, seamless drawn steel case.

5

Sturdy, arc-resistant, shockproof molded cap.

6

Steel primary terminals, positively soldered leads, and anchored windings for greater strength and durability.

7

Special elastic nipple for protection of high tension outlet from grounds caused by dirt and moisture.

8

High quality porcelain insulator for internal assembly support.

A complete line of Delco-Remy 6- and 12-volt oil-filled service coils for every Delco-Remy application, old or new, is available everywhere through United Motors distributors.

Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION, ANDERSON, INDIANA

SPIN WHEREVER WHEELS TURN OR PROPELLERS SPIN

SPIN

Chilton's MOTOR AGE, AUGUST, 1954

How to make more profit servicing brakes

You will find the questions and answers that follow well worth the time it takes you to read them



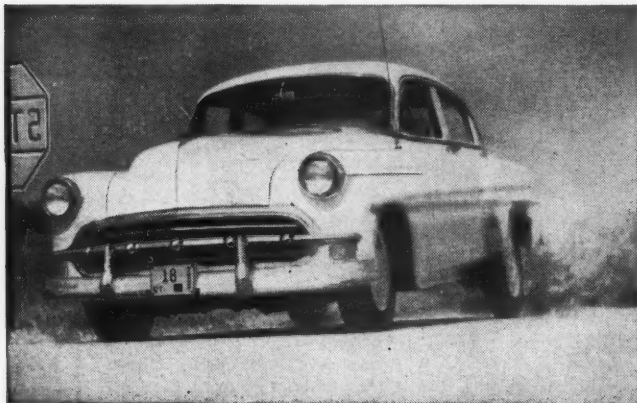
1. "Does the manufacturer of the linings I use supply me with effective sales helps?"

If your answer is no, you will benefit from talking to a Raybestos jobber. He'll tell you that Raybestos contract dealers are supplied by the factory with hard-hitting point-of-sale material and other action-getting sales helps month after month.



2. "Are the linings I'm using known for their quality?"

Unless you work with linings with a real reputation for quality—like Raybestos Proving Ground Tested Brake Linings—you risk your own name and the lives of your customers. All Raybestos linings, riveted and bonded, are branded.



3. "Can I assure my customers that the linings I use are safe?"

If you install Raybestos, yes. Grueling accelerated road tests and huge dynamometers test all Raybestos linings—the only linings made by seven different manufacturing processes and then factory packaged in scientifically engineered combinations for all car makes and models.



4. "How can I increase my customers' trust in me?"

Use the Raybestos Brake Certificate packed with all lined shoes and in all boxed sets. This written proof of safety, advertised month after month in the Post and Farm Journal, will give people extra confidence in you, help you build up all ends of your business.

Don't let your customers learn about bad brakes by accident!

Reline with
Raybestos®
AMERICA'S BIGGEST SELLING BRAKE LINING



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RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Packings • Abrasive and Diamond Wheels • Bowling Balls



1. The tough customer expects top performance from his car . . .



2. And if he doesn't get it, you can be sure he'll be fighting mad!



3. But if you want him to be a real pal . . .



4. Quietly explain that with "Ethyl" gasoline he'll get full power from his car. (Of course, the timing should be set for "Ethyl" gasoline.)

© 1954, Ethyl Corporation, New York 17, N. Y.



Chilton's MOTOR AGE, AUGUST, 1954

How to spot a headlamp prospect

... and why you should replace his deficient headlamp with a G-E!



1 BLACKENED BULB? Look for the small inner bulb behind the lens. It may be blackened by tungsten deposits. If so, it's absorbing light. This can't happen with a General Electric headlamp because it's *one big bulb*. The inner bulb is replaced with rugged filaments that don't grow dim.

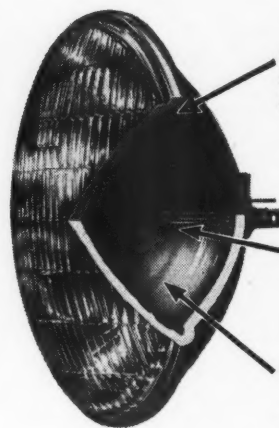


2 CONDENSATION? Water inside the lens deflects light, ruins the beam pattern. It robs your customer of necessary light. Replace with a G-E headlamp. Reflector and lens are fused together in one piece, sealing out moisture completely.



3 DETERIORATED REFLECTOR? When you see a rusted or tarnished reflector, you know light output is being cut. Replace this deficient headlamp with a G-E headlamp. It can't tarnish or rust because no moisture can get in.

Here's why G-E headlamps DO NOT GROW DIM!



ALL ONE PIECE—reflector and lens are fused together. Dirt and moisture can't get in.

NO INNER BULB TO BLACKEN—rugged filaments that can't shake loose replace small inner bulb so that blackening is no problem.

MIRROR-LIKE REFLECTOR—stays clean and efficient for the life of the lamp.



← FREE with \$13²⁵* G-E lamp order!

Eye-catching sign flashes your telephone number!

This sturdy display is a real customer stopper. 12" high by 11" wide, it flashes the slogan, "CARE WILL SAVE YOUR CAR" and lights up your phone number! Comes

*Net Price

with flasher and 6-foot cord. It's a constant reminder to customers to call on *you* for service.

To get yours, simply order \$25 (list value) of G-E sealed beam or other miniature lamps. Cost to you—\$13.25. Your profit—47%! Order from your G-E distributor today!

GENERAL  **ELECTRIC**

ARE YOU GETTING THE

HYDRA-MATIC

DYNAFLOW

POWERGLIDE

FORDOMATIC

MERCOMATIC

BIG MONEY

SERVICING AUTOMATIC TRANSMISSIONS

THESE *New Britain* TOOLS
PUT YOU IN BUSINESS.....

Designed especially for quicker, easier servicing of increasingly popular automatic transmissions, this new Family of famous NEW BRITAIN Tools makes it easy for you to make big profits in this fast-growing field. For Hydra-matic transmissions: the AH-10 for external adjustments; the AH-11 and AH-12 for internal adjustments. For Dynaflo and Powerglide: the ADP-10. For Fordomatic and Mercomatic: the AF-10 for front bands; the AF-11 for rear bands. Each tool packed complete with illustrated instructions for use.

These few basic Tools actually open up an automatic transmission service department for you... let you take advantage of today's big money-making opportunity. Ask your Jobber about these new Tools today. See how easily you can earn profits in this exciting new field.

HYDRA-MATIC
AH-11 Front Band
Adjusting Tool

HYDRA-MATIC
AH-12 Rear Band
Adjustment Gauge

HYDRA-MATIC
AH-10 External Band
Adjusting Tool

DYNAFLOW — POWERGLIDE
ADP-10 Adjusting Tool

FORDOMATIC-MERCOMATIC
AF-11 Rear Band
Adjusting Tool

FORDOMATIC-MERCOMATIC
AF-10 Front Band
Adjusting Tool

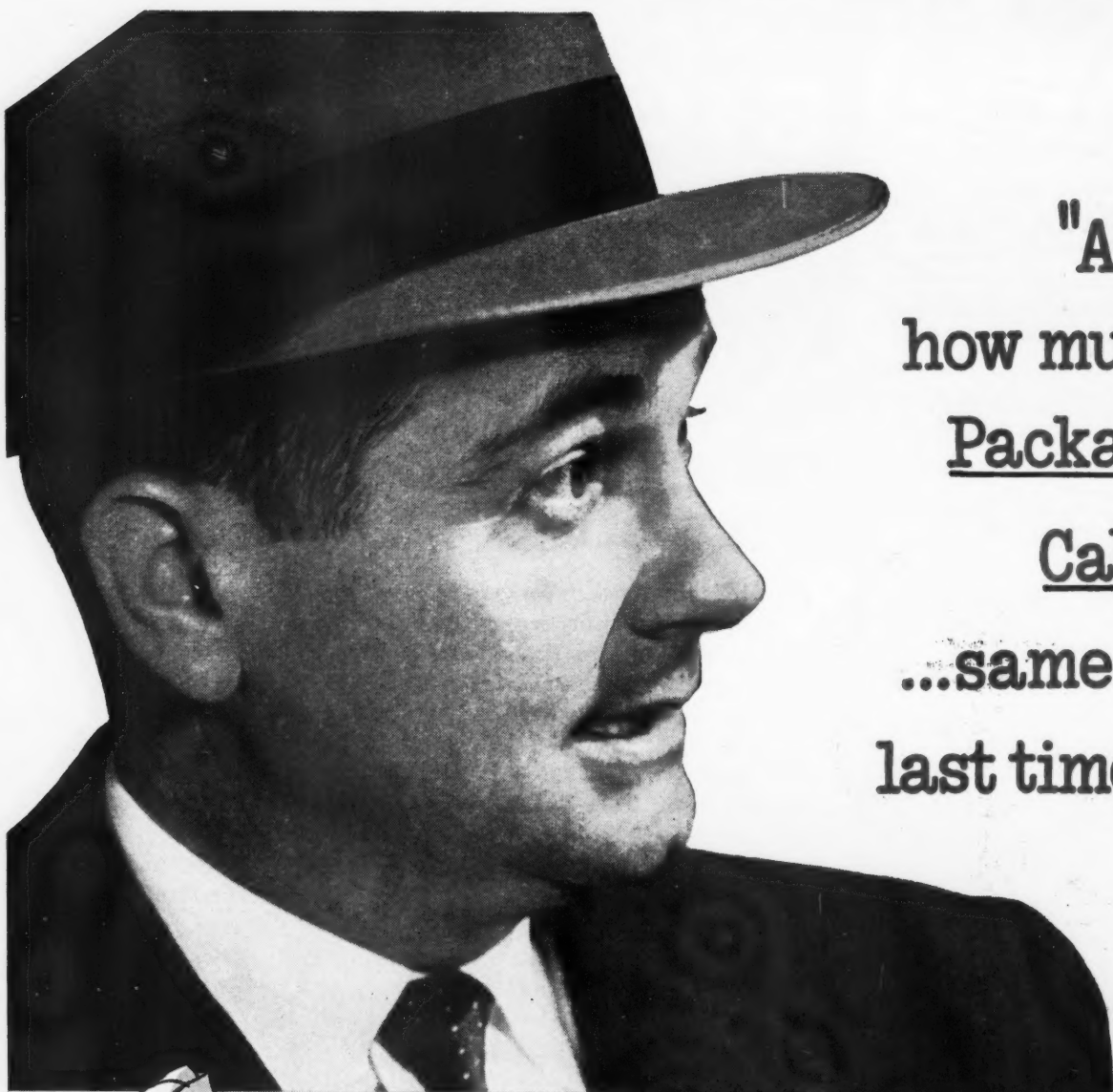


New Britain

GREATER STRENGTH • BETTER FIT

THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN.

HAND-TOOLS



"And
how much
Packard
Cable
...same as
last time?"



Build up your
business with
the "BIG 3" in the
cable field!

The record shows that Packard cable is preferred by automotive engineers for cars, trucks, buses and tractors. Preferred, too, by vehicle owners and repair shops for replacement use. And preferred by jobbers and dealers because it has a quick turnover.



PACKARD BATTERY CABLE—Packard battery cables are used as original equipment on more cars, trucks, buses and tractors than cables of any other make. Packard battery cables are full size, full weight . . . are available with **LEADALLOY** terminals or leaded brass terminals. Both types are packaged in individual cartons—both deliver top performance—both have acceptance, everywhere.

FOREMOST BUILDER OF
AUTOMOTIVE WIRING

"I need more.
I'm using
Packard
on all my
service jobs
now."



PACKARD IGNITION CABLE—Long considered the standard of the automotive industry, Packard high-tension cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard **FOUR-FORTY** and Packard **LAC-KARD** ignition cables are designed to deliver balanced performance in every application. For dependability on the job, choose Packard!



PACKARD LOW-TENSION CABLE—As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's **249 COMPOUND** insulation, by every laboratory test and by the test of long, hard usage in the field, has exceptional resistance to heat, oil, chemicals and abrasion.

Packard
REG. U.S. PAT. OFF.
TRADE MARK

Packard Electric Division
General Motors Corporation
Warren, Ohio

A GENERAL MOTORS PRODUCT



A UNITED MOTORS LINE

THE

Hottest line

IN THE BATTERY INDUSTRY



Willard

Weathermaster

with key-operated

CLIMATE CONTROL

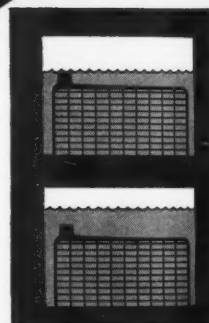
Two Great Batteries In One at the turn of a Key...

1. EXTRA POWER ... For Cold Weather Starting.

Low water level increases power-producing acid concentration ... guarantees far greater power for faster starting on the coldest winter mornings.

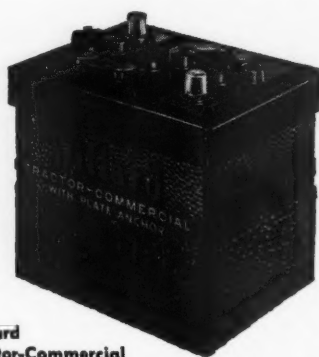
2. LONGER LIFE ... For Hot Weather Driving.

High water level guarantees a cooler-operating battery for hot weather driving ... guarantees greater protection against the most common cause of *all* battery failure—overcharging.



Willard
Super Master

Metalex Grids give it 151% more protection against overcharging, the number one battery killer! Actual tests in salesmen's cars and taxis, prove this battery lasts up to four years and longer.



Willard
Tractor-Commercial

The only battery in the world with plate anchor which gives absolute and positive protection against battery killing vibration. Sell it to Farmers ... sell it to Truckers.



Willard
Heavy Duty De Luxe

A popular priced battery with up to 56% more starting power at zero. Genuine rubber container. Available in sizes to fit every car and most trucks.

Willard Price Leader

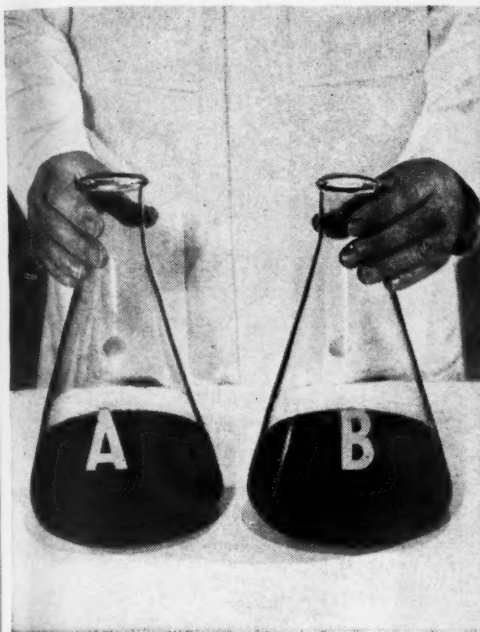
The W-1-80. It's not built cheap to sell cheap ... it's Willard quality throughout. Sell it for \$16.25 ... allow a liberal discount for the old battery from this price and you still make a big profit.

Willard new low prices are set so the dealer can wheel and deal and make a big profit besides. Call your Willard Distributor now!

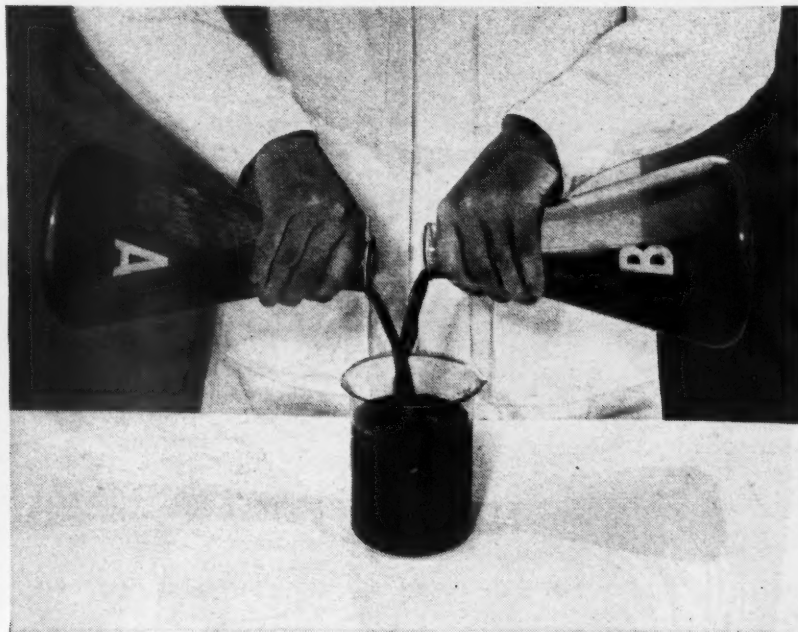
WILLARD STORAGE BATTERY COMPANY •

FACTORIES IN: CLEVELAND • LOS ANGELES • DALLAS
MEMPHIS • PORTLAND • ALLENTOWN • TORONTO

Why you're smart to sell Du Pont "Zerone" and "Zerex" Anti-Freezes



WHY DO Du Pont anti-freezes use a chemical (non-oily) rust inhibitor? These two pictures tell the story. Flask A contains ordinary anti-freeze with oil inhibitor. Flask B contains a Du Pont anti-freeze with its exclusive chemical inhibitor. The same amount of rust particles have been added to both.



LAB TECHNICIAN empties flasks. Notice how oily film in A causes rust to stick to sides. Then see how Du Pont anti-freeze holds particles in suspension, so they empty out with solution, leaving B clean—proof that "Zerone" and "Zerex" keep cooling systems cleaner, protecting you from customer complaints.

...and why you're smart to order them now



DU PONT "ZERONE"®
... America's great
money-saving
anti-freeze value.



DU PONT "ZEREX"®
... the outstanding one-
shot, winter-long
anti-freeze.

You'll want to be ready when another big Du Pont "Anti-Freeze Week" promotion urges customers into your station for "Zerone" and "Zerex" this fall.

This year, "Anti-Freeze Week" packs added punch. "Zerone" and "Zerex" are backed by their own TV show every week right through the profitable anti-freeze selling season. That's in addition to the annual fan-

fare in national magazines, newspapers, farm publications, and billboards. There's a colorful, "best-in-the-industry" display kit to help you tie in with Du Pont's big promotion. It's yours free.

So get your order in now. Make sure that when the anti-freeze "gold rush" starts, you'll be prepared to cash in on it.

YOUR "ZERONE"- "ZEREX" DISTRIBUTOR has this interesting demonstration kit. It convincingly shows how Du Pont anti-freezes keep cooling systems cleaner. Make sure you see it.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

*Easy-to-recognize...
Customer-preferred
tamperproof cans*

Look who's plugging

LIVELY CARS AND LIVELY GAS
CALL FOR LIVELY PLUGS



AC SPARK PLUGS

We'll bet this is the first time you ever got a tip from a horse! But, it's a good one, 'cause when it comes to spark plugs, our Sparky knows what he's talking about. He'll tell you the big news about AC—that AC's exclusive "hot-tip" feature means a remarkable saving in gasoline because a hot insulator tip burns away carbon and oil deposits, prevents plugs from fouling. Gas mileage goes up! Horsepower goes up! You get quicker, easier starting, too!

So, when your plugs get close to the 10,000-mile change point, switch to "hot-tip" ACs. That tip comes straight from the horse's mouth. Why not act on it now? There's a registered AC dealer near you.

STANDARD FACTORY EQUIPMENT ON CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • CADILLAC • GMC

AC SPARK PLUGS

ENGINEERED TO THE TEMPO OF TODAY

PATENTED INSULATOR MATERIAL
 Stays clean longer because thin tip burns away carbon deposits and oxide coatings.

PATENTED HEAT-SHIELD CONSTRUCTION
 A seal between the insulator and metal shell that prevents power loss and fuel waste.

PATENTED COPPER-GLASS SEAL
 A special patented material that fuses to form a tight seal against power loss.

Boosts Power... Saves Gas!

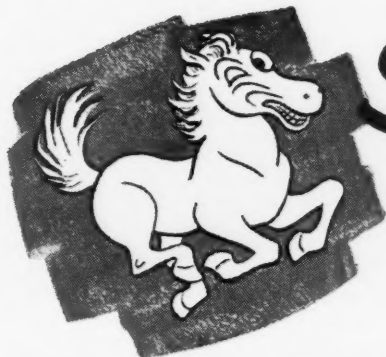
The Exclusive AC Petticoat Insulator
 This recessed thin tip skirt, but does not touch the wire. It burns up much more quickly, burns away carbon deposits which are likely to foul other plugs which do not have this feature.

AC SPARK PLUG DIVISION GENERAL MOTORS

Kickoff ad — page and a half in *The Saturday Evening Post* — appears August 14. From then on Sparky will be plugging AC Spark Plug sales from coast to coast. Watch, but don't wait. Get going with Sparky!

Be sure you're registered as an
 Dealer to receive the next BIG
 AC SPARK PLUG PROMOTION K!

AC SPARK PLUGS!



Sparky-the famous horse!

**Selling the ONE Spark Plug
Engineered to the Tempo of Today**

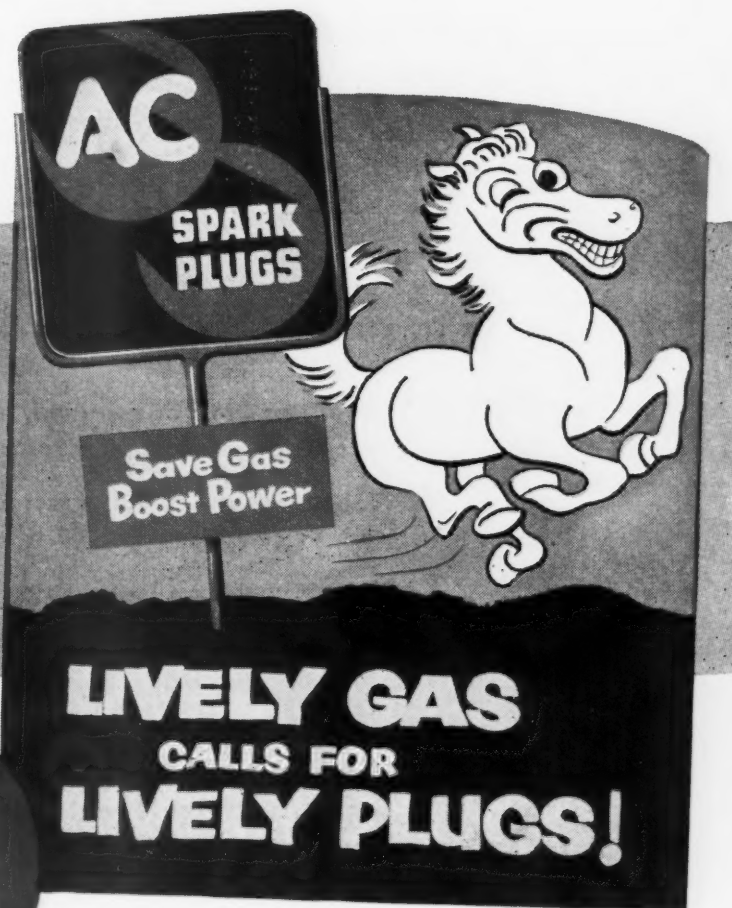
Sparky gallops into the picture . . . a high-octane, modernized Sparky in tune with stepped-up fuels and high compression ratios! Yes, and that makes it a red-letter day for AC dealers and wholesalers everywhere! Of all the famous horses in history, one stands out—Sparky, the AC horse—the greatest AC salesman of them all!

You'll see him everywhere. On the billboards

coast to coast . . . in national magazines . . . men's magazines . . . farm publications . . . fleet magazines . . . bus and truck publications. He'll appear in point-of-sale material; and wherever you see him, you'll find a powerful selling message for AC Spark Plugs.

AC is on the move—and leading the movement is Sparky. Get on the band wagon! Let Sparky help you to bigger-volume sales!

At the right is an attractive four-color counter or window display piece featuring Sparky and AC's famous highway sign. The AC field man can supply Registered AC Dealers.



AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION • FLINT, MICHIGAN

Help your customers get rid of The Crankcase Cocktail blues with...



THE WALKER OIL FILTER 30-SECOND SALES STORY

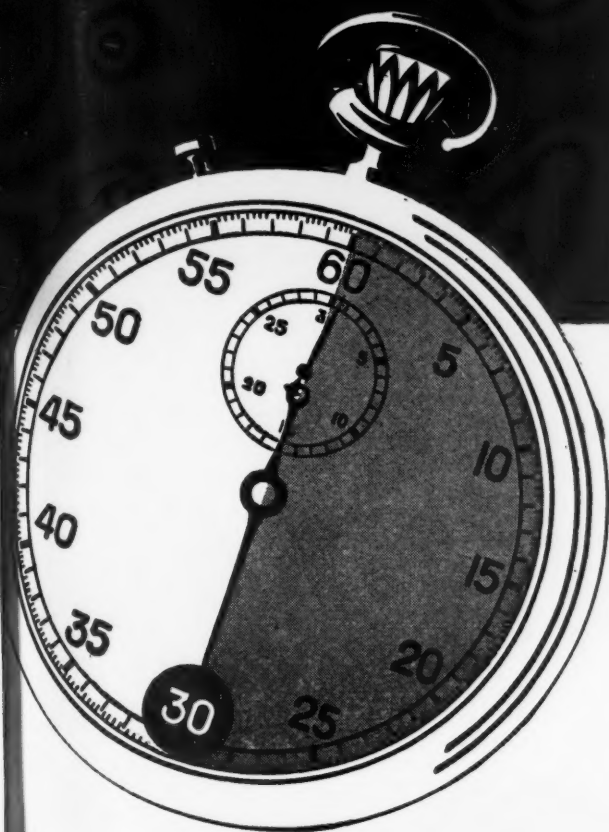
Most of your customers are victims of the Crankcase Cocktail—that destructive mixture of dirt, dust, combustion by-products and water that causes unsatisfactory car performance . . . leads to costly repair bills.

Here's the fast way . . . the easy way . . . to protect your customers from such headaches and boost your oil filter sales.

Tell them the Walker Oil Filter 30-Second Sales Story . . .

- Every gallon of gasoline burned in an internal combustion engine produces more than a gallon of water.
- Most of that water evaporates or passes out the exhaust. But some water always blows by the piston rings into the crankcase oil.
- Water in the oil is the chief cause of sludge and source of corrosive acids.
- Sludge and acids cause poor engine performance and costly repairs.
- The Walker Oil Filter is the one filter specifically designed to guard against crankcase water and against all other harmful oil contaminants.





CAR OWNERS NEED THE PROTECTION OFFERED BY THE WALKER OIL FILTER.

Their start-stop, short-trip driving pattern is a cold engine operation—the kind that promotes combustion blow-by and crankcase condensation.

The distinctive features of the Walker Oil Filter and the Walker 30-Second Sales Story make a real sales team for you. And Walker has added *LIFE* magazine to your sales force to tell the Walker Oil Filter story to *your* customers.

If you are not handling Walker Oil Filters, contact the Walker distributor nearest you today. Or write direct to Walker at Racine, Wis.

WALKER OIL FILTERS

WITH PATENTED *Laminar* CONSTRUCTION

*Guard Against
Crankcase Water*



WALKER MANUFACTURING COMPANY OF WISCONSIN, RACINE, WIS. • OIL FILTERS . . . EXHAUST SILENCERS . . . JACKS

Spotlight on the

First Resistor Type Spark Plug
Approved as Original Equipment



Leader

A Prediction That Came True

IN 1948 AUTO-LITE introduced a sensational new automotive spark plug with a built-in resistor. Many uninformed people said this new type plug was simply a "gadget" designed to eliminate radio and TV interference . . . that it had no beneficial effects on the actual operation of an automobile.

WHY A RESISTOR SPARK PLUG?



Auto-Lite followed its original announcement with the prediction that the resistor-type plug was a great forward step in the physics of ignition, that it would be widely used by car manufacturers, and that other spark plug manufacturers would follow Auto-Lite's lead. Proof of the truth of this prediction came quickly.

CAR MAKERS ASK BETTER PERFORMANCE

After the most exhaustive tests, engineers of leading car manufacturers adopted the Auto-Lite Resistor Spark Plug as original equipment. Tests showed the new type spark plug delivered quicker starts,



smoother performance, greater gas savings, and double life under equal service conditions when compared to spark plugs without built-in resistors. It's no secret now that other manufacturers have followed Auto-Lite's lead.

ENGINEERS WORK TOGETHER

It was only natural Auto-Lite should lead in this development, for Auto-Lite engineers are working constantly with the engineering staffs of car manufacturers to provide better automotive ignition. They know, years in advance of actual production, the goals of these engineers . . . the changes contemplated in engine design . . . the need for new types of coils, distributors and, significantly enough, spark plugs.

AUTO-LITE PIONEERS

That's why, as engineers of the complete ignition system, Auto-Lite has pioneered in improvements of great benefit to car maker and car owner alike. Such leadership proves without question the fact . . . "YOU'RE ALWAYS RIGHT WITH AUTO-LITE."

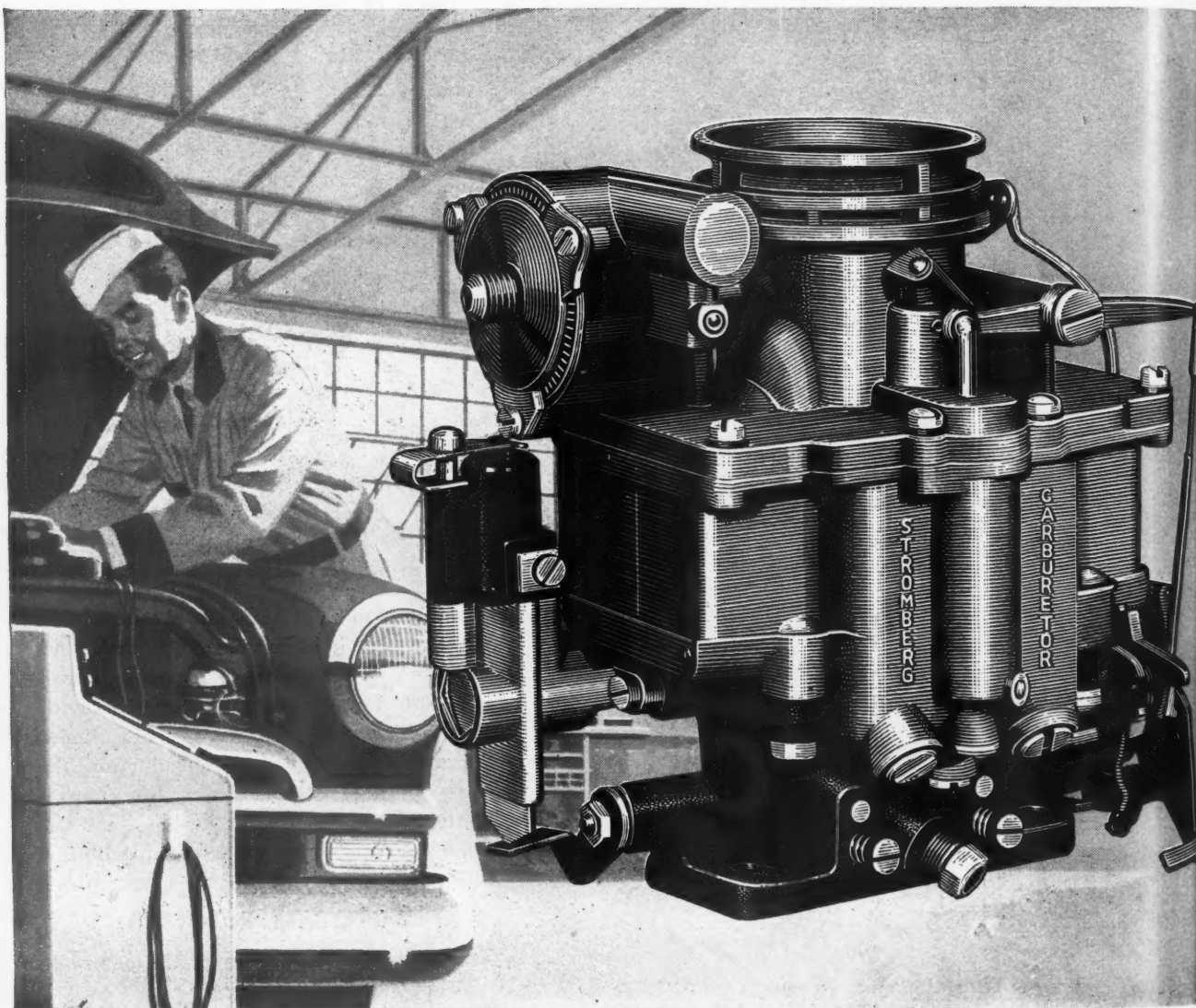


Auto-Lite Spark Plugs—Patented U.S.A.

AUTO-LITE SPARK PLUGS

*Auto-Lite makes a complete line of spark plugs for every use including
Standard, Resistor, Transport, Marine, and Aircraft*

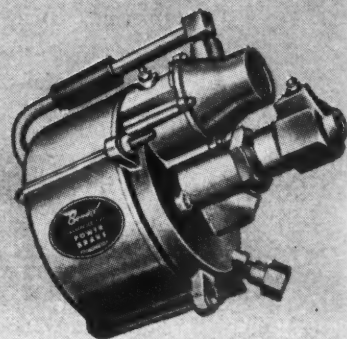
Boost your reputation



THE NEW *Bendix* POWER BRAKE . . . FIRST IN THE AFTERMARKET FOR ALL CARS

The big swing is to power braking. And with the new Bendix® Passenger Car Power Brake—designed and engineered to fit *all* makes of cars—you can cash in on this big, ready-made market right away! The Bendix Power Brake is

easy to sell, easy to install. Just 3 simple connections—no special tools or equipment are needed. Installation kits are complete in every detail—no extras to buy. Act now! Get the full story today from your Bendix Central Distributor.



... for Quality Tune-Ups!

INSTALL A NEW

STROMBERG CARBURETOR

ON EVERY TUNE-UP REQUIRING
MAJOR CARBURETOR SERVICE

HERE'S WHY: You can do the best tune-up job in the world but if the carburetor is worn—and you make only temporary repairs—you're in for trouble. More than that, your reputation is at stake. With a worn carburetor or one that has been temporarily repaired, your customer won't get the engine performance he's banking on and paid for from your tune-up.

HOW TO AVOID THIS SITUATION

Here's one sure way you can steer clear of this situation and, at the same time, give yourself a reputation for doing the best "tune-up jobs in town": On every tune-up that requires major carburetor service, play it safe and install a new Stromberg* Carburetor. Then and only then will you eliminate the possibility of your customer finding fault with your work.

HOW TO SELL YOUR CUSTOMER A NEW STROMBERG

Explain to him that his carburetor has worn beyond peak efficiency. That temporary repairs will bring only temporary results. That a tune-up alone won't give him the top performance or gas mileage he expects. A worn carburetor can waste 20% or more of today's high-priced gasoline. This is a fact close to your customer's pocketbook. Especially when you let him know you can install a new Stromberg for less than the price of 60 gallons of gas and that he can expect to save that much in a couple of months of normal driving.

And here's further, positive proof of Stromberg economy: In the 1954 Mobilgas Economy Run, Stromberg-equipped cars took 1st and 2nd places in the big, over-all Sweepstakes event, and three 1st places in the divisional price-class events!

IT'S EASY TO HANDLE STROMBERG CARBURETORS: Here's what Bendix has done to make Stromberg Carburetors a major

profit item for every service station, garage and repair shop: The entire line has been streamlined and simplified. Dozens of models have been combined into a few so that now you can stock, in small space and at a low investment, a Stromberg for most cars or light trucks on the road today.

What's more, Stromberg gives you these exclusive advantages: **QUICK, EASY INSTALLATION**—No plumbing required, no special skill needed. You can install a Stromberg almost as quickly as you can change a battery.

FASTER TURNOVER—Streamlined list of models means small, low-cost, inventory for you. Your money turns over faster and brings a bigger profit.

A BIG-PROFIT SALE—Your profit comes from installing a unit in only a matter of minutes. You eliminate exchange problems and trade-in troubles.

*REG. U. S. PAT. OFF.

SPECIAL STARTER STOCK



CHEVROLET



FORD



PLYMOUTH

Special starter stock consisting of 3 Stromberg Carburetors—Chevrolet, Ford, Plymouth—covers over 12,500,000 cars, or 1 out of every 4 cars you service. This popular, low-cost inventory assortment gives you "Big 3" coverage with minimum investment. Replace instead of repair with Stromberg!



CLEAN METAL PARTS THE SAFE,
SURE, EASY WAY . . . USE

Bendix METALclene

Quickly removes dirt, grease, grime, grit, carbon from all metal parts. Has longer life, lesser evaporation rate than water, greater cleaning power and higher percentage of active ingredients. Non-toxic, non-explosive. Works at room temperature. No need for hand scraping or brushing.



BENDIX PRODUCTS DIVISION SOUTH BEND, INDIANA

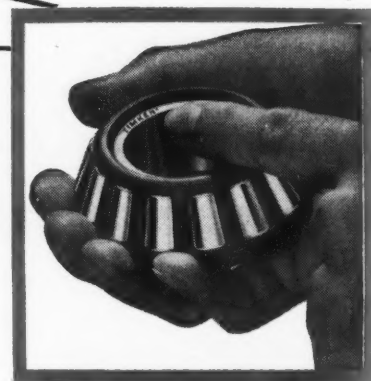
Export Sales: Bendix International Division, 205 E. 42nd St., N.Y. 17, N.Y. Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada

STROMBERG CARBURETORS—Cars, Trucks, Industrial • BENDIX VACUUM POWER—Power Brakes—Passenger Cars, Trucks, Trailers • HYDRAULIC CONTROLS—Power Steering—Passenger Cars, Trucks, Trailers, Buses, Industrial, Agricultural • BENDIX BRAKES—Factory-New Lined Shoes, Lining Segments, Repair Parts • BENDIX METALCLEN—All-Purpose Parts Cleaner.

It takes all kinds of customers...



**...but they all want the best.
And when it's bearings,
just tell 'em it's *TIMKEN!***



To keep your customers coming back, make sure they know you use the best replacement parts. A good way is to point out the trademark "Timken®" whenever you install a tapered roller bearing. Your customers know it stands for quality, dependability and

performance. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN **TAPERED ROLLER BEARINGS**
TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

MORE
Service
VOLUME!

ADDED
Service
PROFIT!

Installing



**Factory-
Equipment**

HYDRAULIC VALVE LIFTERS

Hydraulic Valve Lifter replacement business is already an important service factor. It's due to be greater as recent-year models show up for service in greater numbers. Let your established AC supplier cover your Hydraulic Valve Lifter needs for GM cars. You can be sure of service-customer satisfaction because these lifters are precision-engineered for the specific car. For your protection and for easy identification, these Hydraulic Valve Lifters are packed in sets in GM car division cartons. Each lifter has a peelable plastic coating, enabling rust-proof storage in any climate. Get in touch with your AC supplier.

*NOW Available
through your*



SUPPLIER

AC SPARK PLUG DIVISION  GENERAL MOTORS CORPORATION
 FLINT, MICHIGAN

Check All The Ways a
DESOTO-PLYMOUTH
Sales Agreement
Scores For You!



Two Great Cars — One Sales Agreement



A Market for 90% of New Car Prospects



Top-Rated Groucho TV & Radio Shows



Outstanding in Advertising Support



Undisputed Engineering Leadership



Chrysler Corporation Reputation



Industry's Most Advanced Features



A Large, Trained Field Organization

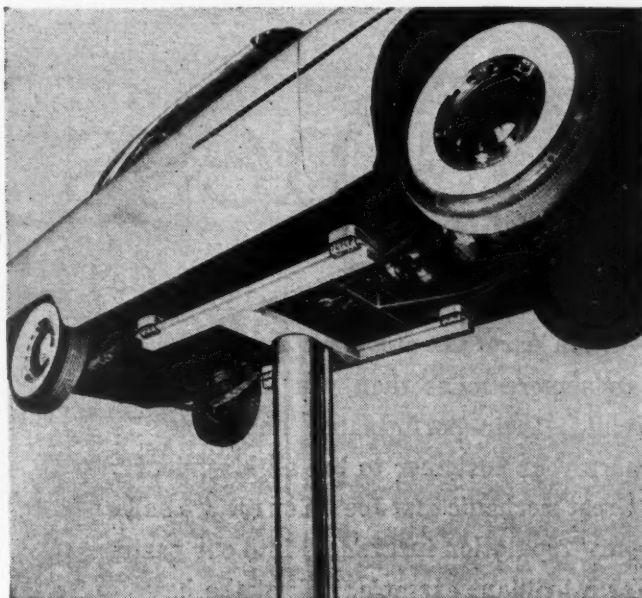
1854 • 1954

our **100TH** *year*
OF SUCCESSFUL MANUFACTURING EXPERIENCE

NEW

Curtis FRAME LIFT

*Makes Under-Car Work
Faster and Easier...*



This new lift meets a wide range of needs in price and performance. It's ideally suited to all kinds of service station or repair shop use:

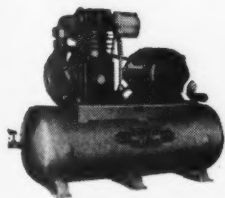
- **MAXIMUM ACCESSIBILITY** . . . reach all points easily for lubrication, inspection, adjustment and repairs. Fast, low-cost under car mechanical work.
- **IMPROVED LUBRICATION** . . . car springs are relaxed and bearings are free — permits full grease penetration at lower pressures.
- **QUICKER WHEEL, TIRE, AND BRAKE WORK** . . . free-hanging wheels facilitate brake work, tire rotation, wheel repacking, and putting on chains.

plus . . . **CLEAR FLOOR SPACE . . . EASY SPOTTING . . . ECONOMICAL INSTALLATION!**

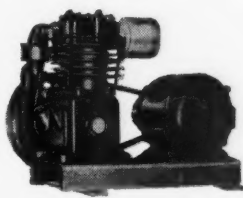
OTHER TYPES OF **Curtis** LIFTS—

Two Post Shop Lift
Single Post Roll-On Lift
Single Post Free Wheel Lift
Two Post Truck and Bus Lift

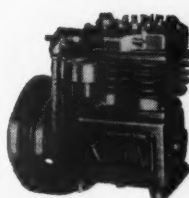
Air Compressors



¼ H.P. through 15 H.P.

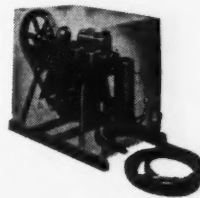


¼ H.P. through 50 H.P.



¼ H.P. through 50 H.P.

High Pressure Car Washer



1 and 2 Gun Models—
300 Lbs. Water Pressure

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Manufacturing Company

1946 Kienlen Avenue, St. Louis 20, Missouri

756

Blue Streak Ignition is better for your business

39000 ignition specialists agree: Blue Streak ignition parts are sturdier; they last thousands more miles than you imagine they should; their performance and long life spurs your customer to tell all his friends, "Great mechanic that Joe". You see, we build your "reputation insurance" into our parts. For a brilliant example, look at the heavy-duty **BLUE STREAK TRIPLE TOP COIL**.

BALANCED WINDING

Primary and secondary windings are precisely balanced for greatest efficiency, easy starting and high speed operation.

SUPERIOR INSULATION

In the critical area near the core where the highest voltage is developed extra layers of top quality insulation paper protect against coil-killing high-tension shorts.

TRIPLE PROTECTION TOP

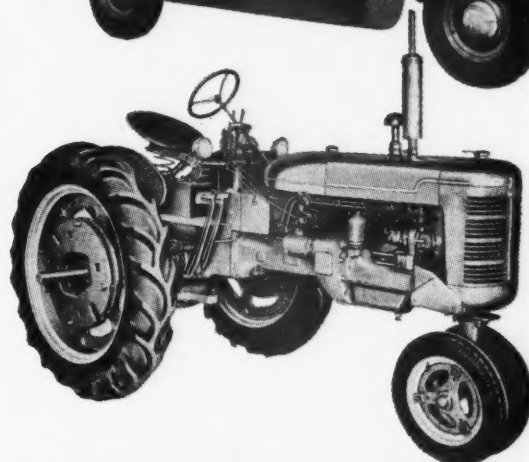
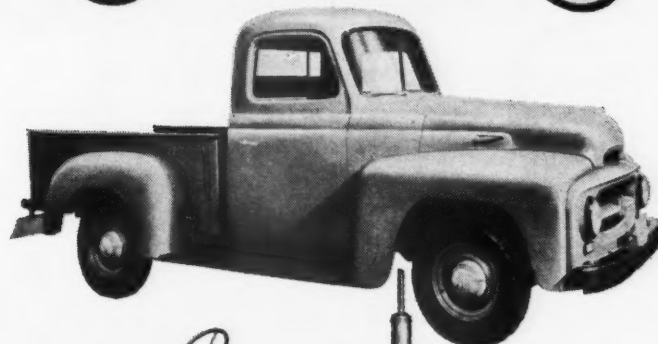
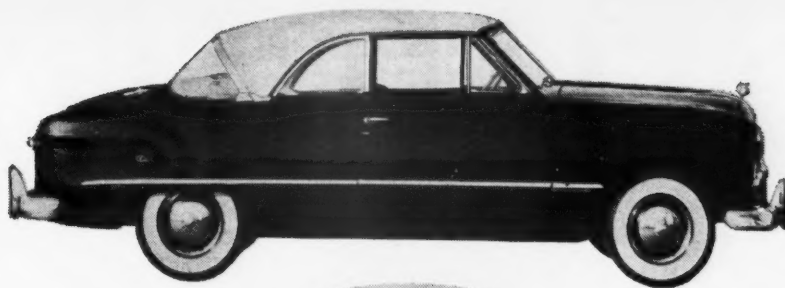
Unique pagoda design protects against high-tension flashover, entrance of coil-killing moisture and accidental loosening of cable.



**SEE YOUR
BLUE STREAK
JOBBER**

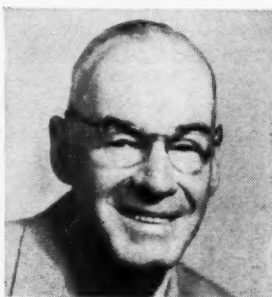
STANDARD MOTOR PRODUCTS, INC. Long Island City 1, N. Y.





"Farmers are triple prospects"

says L. T. White, Sr., president, Motor Bearings and Parts Company, Inc., Raleigh, North Carolina



"Besides his car, the farmer now often has a truck and one or more farm machines as well," says Mr. White. "He is a triple prospect for a great number of parts. Automotive advertising in *Country Gentleman* is important support to dealers selling farm customers."

Automotive jobbers and dealers alike are glad to see their lines advertised in *Country Gentleman*—the most effective selling force in today's car-truck-tractor farm market.

Farm buying makes Automotive Advertising

3 times more effective in . . .

Country Gentleman

The magazine for Better Farming

A Curtis publication • Circulation now over 2,600,000

Chilton's MOTOR AGE, August, 1954

Full-Flow Spring *—another reason why* Sealed Power KromeX

Piston Ring Sets deliver the world's best
**ALL-AROUND PERFORMANCE
FOR THE MOST MILES!**



Sealed Power's exclusive Full-Flow Spring, which is part of the MD-50 Steel Oil Ring in every KromeX Ring Set, is a prime factor in the immediate oil control for which these sets are famous. Twice as many slots, so no piston oil hole can be blocked, no ring slot can be blocked, and a full flow of oil is assured through ring, spring, and piston oil holes, back to crankcase. Even curves produce even distribution of pressure for longer wear and easier starting, even in badly tapered and out-of-round bores. No other piston ring set can match Sealed Power KromeX results!

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW CARS! BEST IN OLD CARS!

Sealed Power Motor Parts—The Heart of the Engine • Rings, Pistons, Pins, Sleeves, Valves, Water Pumps



Newscoop

"I Cover the Autofront"by Len Westrate

THE HOUSE COMMERCE COMMITTEE APPROVED the Crumpacker Bill (H.R. 9769) to allow car manufacturers to revoke franchises of dealers who bootleg cars, as Motor Age went to press.

THE COMMITTEE ALSO REPORTED favorably on the Hinshaw Bills (H.R. 9916, 9917) to bar fictitious freight charges by manufacturers on shipments of motor vehicles and other products to dealers.

HOWEVER, THERE IS NO INDICATION or likelihood now that any of these bills would pass at this session. Administration leaders on Capitol Hill were concentrating on getting floor action on the "must" bills in the remaining days before adjournment.

Makers On Spot In FOB Fight

AUTOMOBILE MANUFACTURERS ARE MORE CONCERNED about the possibility of revision of freight charges on new cars than about any other action dealers may try forcing. The current practice is to charge transportation from Detroit to point of sale, regardless of where car was built. Dealers at remote points protest, say freight runs up to \$400 per car, kills sales.

FACTORIES KNOW COMPLEX, TECHNICAL ARGUMENTS to justify F.O.B. Detroit pricing will baffle the public, and make their position hard to explain. The feeling in the trade is that there is room for compromise, but also danger of higher prices in near-factory areas if uniform transportation charges are adopted.

★ ★ ★

SUSPENDED CLUTCH AND BRAKE PEDALS will be found on nearly all cars next year. Chevrolet will be among those to offer them on 1955 models. Ford already has them, and Plymouth and Dodge also will have them next year.

Makers Retool Longer. What's Up?

MODEL CHANGEOVER BY SOME car companies this year will run from 6 to 8 weeks for the first time since before World War II. Chrysler will go down in August for complete retooling, start building 1955's in late September, for public announcement in late Fall.

CHEVROLET IS EXPECTED to start tapering off in August, it also will be down for a few weeks before starting to stock dealers with new models. Both firms expect to have adequate stocks in dealers' hands to carry them through, yet have no cleanup problems.

Nomad To Roll Next Year

THE CHEVROLET NOMAD, small, plastic bodied station wagon on a 115 inch wheel-base chassis, is slated for production some time next year, according to present plans. It is not definitely known, however, whether it will be built in plastic or steel. The car was a hit in all GM Motorama showings.

★ ★ ★

IT HAPPENS IN THE BEST OF FAMILIES. Chevrolet threw a press party at St. Louis to show off its Corvette production facilities and announced production of 1000 units a month. Two weeks later, schedules were slashed to a 300 a month level because of the slump in demand.

Parking Made Easy

PARKING AT THE CURB, bane of women drivers, and many men for that matter, may be taken over by an automatic device in the next year or two. The producer of a high priced car is looking at such a device.

TO OPERATE IT, the driver merely pulls up along side the car ahead of space he wishes to occupy, pushes a button which puts the automatic steering "hydraulic brain" into operation, and shifts it into reverse. As he backs the car slowly, the preset steering unit cramps the wheels at the proper angle and straightens the car up at the curb.

★ ★ ★

FORD HAS PICKED UP a 4000 acre site about 45 miles northwest of Detroit for a proving ground. It is about ten times larger than the present test area at Dearborn, will give Ford long needed nearby test facilities comparable to those of Chrysler and GM.

New Merger 'In The Works'

FURTHER MERGER ACTIVITY to bring Studebaker-Packard and American Motors under one corporate roof is considered "inevitable", it could come within six months, but might take a bit longer. Some use of common components between the two firms is already in the works, regardless of whether the merger deal comes off before 1955 models are introduced.

INTERESTING POINT is that Packard, bothered for years with unwieldy 15 million share stock structure, will shrink it to 3 million with a 5 to 1 exchange, then change name to Studebaker-Packard Corporation with 15 million shares authorized. Studebaker holders will get about 3.5 million shares, leaving 8.5 million unissued. Conclusion: 8.5 million shares for further mergers or acquisitions.

Packard Plunges Into The Turbine Field

PACKARD IS GETTING INTO THE GAS TURBINE engine field, the only independent car maker carrying on such activity. The company has a major contract from the Navy to develop a turbine which a special Packard engineering group has been studying for more than 18 months. It soon will be ready for test.

THE TURBINE, according to Packard, will have high shaft horsepower, favorable fuel consumption, and lend itself to mass production. The company also says its studies "make possible adaptation of gas turbine power to motor vehicle demonstrations."

★ ★ ★

1955 MODELS WILL SEE CONSIDERABLE ADVANCEMENT in the efficiency of automatic transmissions. As already reported here, Buick and Packard will have greatly improved automatic drives. We now hear that Ford is making some changes in its automatic transmissions for Ford and Mercury in addition to the one of the same general design that it will build for Lincoln to replace the HydraMatic.

Continental May Bow Soon

THE NEW CONTINENTAL car to be produced by the Special Products Division of Ford Motor Company apparently will be announced some time next year. William Ford, head of the division, has appointed Young and Rubicam as advertising agency, a sure sign that the car is not more than a year away. Incidentally, it is not the Lincoln Continental. L-M division has nothing to do with the super plush job which will sell in the neighborhood of \$10,000.

★ ★ ★

AMERICAN MOTORS IS MOVING AHEAD with consolidation of Nash, Hudson service activities. Beginning with 1955 models, service procedures and field work for both makes will be under Nash service. Hudson will still handle merchandising, parts, and accessories.

Washington Wire.....by Ray M. Stroupe

OUTLOOK FOR GOVERNMENT CONTROLS over retailing at any early date is very dim. The White House, sizing up world affairs with an eye to future action, will ask for controls only if war seems ready to break out. The plan is to make these curbs strict, if they're used at all.

Pentagon Demands "Why?"

PENTAGON CHIEFS ARE GIVING the armed forces until late November to show why they're running shops for major car and truck repairs. This demand ties in with the Defense Department program of finding ways to reduce military competition with private business.

★ ★ ★

USE OF A PULSATOR to flash lights of stalled cars is approved by the National Committee on Uniform Laws and Ordinances. This group decided in Washington recently to endorse the pulsator as safety equipment without urging that every vehicle be required to have one.

Work or Strike. Not Both

EMPLOYEES WHO STAY ON THE JOB while a place of business is being picketed, but who help the pickets by urging the customers not to buy, may be fired for "disloyal conduct." The National Labor Relations Board, in making this new decision, insists no employee can work and strike at the same time.

★ ★ ★

BACKERS OF THE HOUSE AND SENATE antibootlegging bills were certain last month they had made a good case against this unethical practice, even if congress failed to act before adjourning. National Automobile Dealers Association pointed out to the Senate that bootlegging "exerts a crippling effect on a retail industry."

Safety Check Report Is In

MORE THAN ONE MILLION VEHICLES were voluntarily checked for safe operation during the annual "Check Your Car (Truck)—Check Accidents" program. The "Safety Check" program was conducted during the month of May by the Inter-Industry Highway Safety Committee, in cooperation with the National Safety Council. Included in the 1954 report are the results of community Safety Check programs conducted in 147 cities.

★ ★ ★

GASOLINE ANTI-KNOCK VALUES were at a record high when U. S. Bureau of Mines made its latest study of samples collected from service stations. Premium gas tested by the research method had an average octane rating of 91.9; regular gas average 84.7. Over 4,600 samples were gathered for testing.

End of Business Dip Seen

RETAIL SALES CONTINUE TO MOVE toward new high levels, government officials find. Overall health in the merchandising field gives further backing to the Eisenhower Administration assurances that the business dip which began in July last year has ended.

★ ★ ★

AUTO DEALERS ARE BEING ASKED to boost use of license plate frames carrying a safe-driving message. Sponsoring display of these frames to highlight careful driving habits are auto and tire industries and the President's Committee for Traffic Safety.

Tighter Traffic Laws Listed

SEVENTY TRAFFIC EXPERTS MET in Washington, D. C. recently, for the purpose of making streets and highways safer through tighter traffic laws. Convening at the Chamber of Commerce of the United States, the National Committee on Uniform Traffic Laws and Ordinances—the model-law drafting group of the White House Conference on Highway Safety—amended lighting, braking, maximum speed and driver licensing requirements in the Uniform Vehicle Code, which is the nationally accepted guide for vehicle legislation by the states.

★ ★ ★

BIGGER EFFORTS ARE PLANNED by the military forces to cut down numbers of cars to move people engaged in routine tasks. In the Navy, there's a drive to reduce these service-run vehicles about 9,000 by mid-1955. The admirals predict yearly savings of some \$11 million, starting next November.

Report to Our Readers



How not to go broke

IN this instance we are not going to give you handy hints on how to become rich and well-to-do. Rather, this has to do with getting business and getting paid for it.

Ofttimes that's easier said than done.

All over the U. S. (200 cities in 47 states plus Hawaii and Canada) over 20,000 car dealers and independent service centers are selling repair work, parts and accessories on a time payment plan. It's tailor-made for your business and your business only.

Past due accounts are being collected for automotive retailers on this same plan.

It's called the Certified Automotive Service Finance Plan (C-A-S) and was originally developed by the Automotive Engine Rebuilders Assn. It is now sponsored by all major national associations in the automotive service industry.

The plan works through your local jobber, either individually or by groups. It's a BIG idea. Where it is well organized and actively merchandised good service men, like yourself, are reaping a harvest of business—jobs that people wanted done but just didn't have the cash to lump out.

Budget financing is not new in this industry but the key ingredients in the success of the C-A-S Finance plan is the organization of jobber groups; the selection on a sound, local finance company; the advertising and promotion; and the identification of **you as the individual** who can finance repair work on terms without recourse to you.

It happened in Ogden, Utah

THE success of the C-A-S plan in Ogden, Utah, a city of some 57,000 population, is typical of results in cities where the plan is properly organized and aggressively promoted. The following figures, representing C-A-S bus-

iness only, were recently reported by the Family Finance Co. office in Ogden:

Month	Loans Processed	Volume
February, 1954	79	\$ 8,652.00
March, 1954	107	17,712.00
April, 1954	103	16,936.00
May, 1954	117	19,991.00

Because service dealers were fully informed on the pre-screening of applicants, the Ogden C-A-S financing group is closing roughly 90 per cent of all applications telephoned from dealers. The national average for applications processed is from 60 to 70 per cent.

This big-scale automotive jobber financing plan was pioneered by groups in Indianapolis, Ind. and in Anniston, Ala. It has now expanded to 200 cities with an estimated 100 additional cities and towns organizing.

If your jobber offers the C-A-S Finance plan, make the most of it. If he doesn't it seems important that you ask him for more details.

We see by the papers

We read where a flagpole sitter lowered himself to half mast when he received word of his mother-in-law's death . . . an Irishman proclaims that anybody who asks for advice these days just hasn't been listening . . . a Scotchman told the judge that he left his wife because of illness—he got sick of her. Highway sign reads: "The driver is safer when the roads are dry; roads are safer when the driver is dry."

Faithfully yours.

Frank P. Tighe

EDITOR

NewsScene



THE "MECHANICAL MULE" is the first replacement developed for the "old faithful" Army mule. Weighing 750 pounds and standing 27 inches high, it carries a half-ton load at from 1 to 25 mph. The Willys-made "mule" can be led like a horse, guided with the hand or ridden.

CAR DEALER BECOMES SENATOR. E. D. Crippa, Ford dealer and banker of Rock Springs, Wyoming (pop. 442), is shown being sworn in as Republican Senator from that state. He fills the vacancy left by the late Sen. Hunt. Left to right: Wyo. Governor Rogers; Crippa; V.P. Nixon and Sen. Barrett.





"BOY THAT FEELS COOL," says the little fellow on the bumper guard as he rides blissfully through the car wash with some of his friends. Al Fertman (right) of New York, treated the neighborhood kids to a free shower as each auto passed through his car wash during a recent heat wave. The customers didn't mind and a great time was had by all.



FIRST APPEARANCE in competition for the 2.5 liter Mercedes-Benz took place when driver Juan Fangio put the car through its paces during the recent Grand Prix of Rheims. The eight cylinder car features fuel injection, torsion suspension and dual ignition.



A GLOWING PERSONALITY matches her well illuminated outfit as Miss Gerry Hoffman, Detroit model, dramatically illustrates the variety of lights used on a car. By actual count there are 33 on a Chevrolet, 13 of them accessories.



THE WILDFIRE which Danny Kaye drives in Paramount's "Knock on Wood" is being merchandised to dealers as an aid in promoting their regular line of cars. B. R. Woodill, the car's designer, stands at right.

Fram Revives Its 'Fantom Car' Plan

More than 50 Fram Corporation "Fantom" car drivers will be roaming throughout every section of the U. S.

When a dealer attempts to sell the "Fantom" driver any one of a line of filtration products, the dealer has "caught" the "Fantom" and receives \$5 cash on the spot. Fram will also pay \$5 to the wholesale salesman.

The "Fantom Car" program has already begun. Dealers can easily identify the "Fantom" drivers by asking, "How's Your Oil Filter?"

Stradella Succeeds Schumann at GMAC

Charles G. Stradella, manager, New York staff of the General Motors Overseas Operations Division, has been elected president of the General Motors Acceptance Corp., succeeding John J. Schumann, Jr. Mr. Schumann has retired after an active career in business of 50 years.

The new president is a director and former vice-president of GMAC. He joined GMAC in 1919, the year it was organized

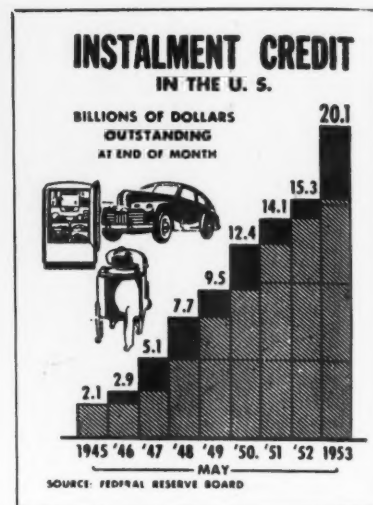
and in 1949 he attained his most recent managerial post.

Zweifel Elected President of CATA

At a meeting of the Chicago Automobile Trade Association board of directors recently, Earl Zweifel, Zweifel Motors, Inc. (Ford), Evanston, Ill., was unanimously elected president of CATA.

Other officers elected were: E. C. Schneider, vice-president; M. F. McCarty, secretary, and Jerry H. Cizek, treasurer. Both

Mr. McCarty and Mr. Cizek were re-elected to their respective offices.



MOVING UP AT MOPAR are Lee Lewis (left) and S. T. Wall. Mr. Lewis leaves his position as operating manager to become director of the division. Mr. Wall advances from assistant sales manager to director of sales.



1954 FORD NUMBER ONE MILLION rolled off the assembly line recently. Plant Mgr. G. T. Vincent is at the wheel. With him are: C. G. Johnston, Reg. Sls. Mgr. (front) and Wm. E. Kimbrough, District Sls. Mgr.





WILBUR SHAW proudly shows the *Motor Age* cover in his "500" Club. The car is his victorious Maseratti.

Hudson Announces Sales Contest

A nationwide sales incentive program that will involve 1430 dealers and 3000 salesmen was announced recently by the Hudson Motor Car Div. of American Motors Corp.

Grand prizes of a one-week expense-paid trip to Mexico City will be awarded to 100 dealers and their wives on the basis of quotas set for each zone and distributorship, the company said.

The quotas are based on the current sales rate and the market potential for each area. Dealers are grouped according to the size and market potential within zones and distributorships.

NADA Exhibit Date Announced

NADA's 1955 Equipment Exhibition will be held January 29 through February 2. The announcement was made by Frank Yarnall, first vice-president of the National Automobile Dealers' Association and chairman of its 1955 Convention Committee, following a recent meeting in Detroit. Mr. Yarnall said that 40 per cent of all exhibition space has been sold.

Highlights of the exhibition will include service clinics featuring nationally known service authorities and a special truck equipment and accessory show.



THE FIRST PLASTIC BODIED CAR built in Sweden has just been turned out by the Volvo Company, in Gothenburg. The "Volvo Sport" is a two-seater with an easily removable plastic top, powered by a 70 HP engine and capable of achieving a top speed of over 90 miles an hour.

Engineering Highlights

by
Joseph Geschelin
Engineering Editor



WITH the 1955 car announcement season in the offing, it is safe to say that every make of car with the possible exception of several independents will have a modern OHV V-8 engine.

New high compression power may continue to split the industry down the middle as to certain choices. For example, there is a decided difference in practice when it comes to fuels. General Motors cars — except Chevrolet — demand premium fuels. Ford and Chrysler, on the other hand, have tailored their engines to feed on regular. Similarly, GM cars, up to this point, have adopted 12-volt ignition systems while the rest of the industry has stayed with 6-v. The new crop of engines will shed more light on both points.

Horsepower Race Continues

Since new V-8's are still in the offing, we can consider the horsepower race as being very much in the picture. It is a foregone conclusion that the new engines will pack more power than the ones they replace. This implies that a selling job still remains. It is still necessary to explain to the public that high horsepower ratings spell safety. Big engines are being intro-

(Continued on page 94)

1954 RETAIL CAR SALES BY PRICE GROUPS*

Number of Cars

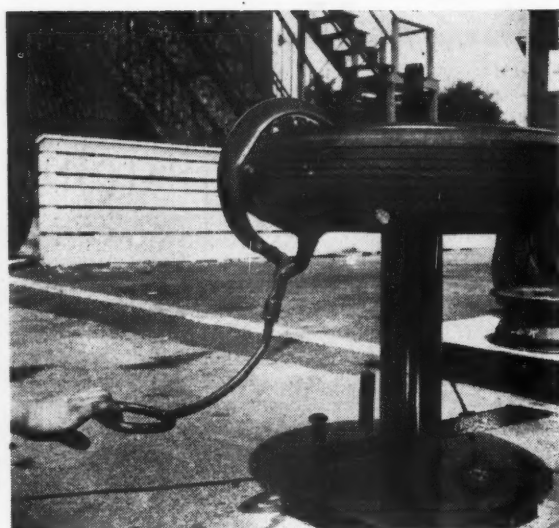
Price Group	May				Five Months			
	1954	1953	1954	1953	1954	1953	1954	1953
Under \$2,000	309,563	59.68	292,927	54.46	1,303,128	58.95	1,252,035	53.68
\$2,001 to \$2,500	130,956	25.25	152,923	28.44	571,986	25.87	653,874	28.14
\$2,501 to \$3,500	58,282	11.24	69,787	12.98	241,777	10.94	319,824	13.76
Over \$3,500	19,874	3.83	22,154	4.12	93,831	4.24	98,131	4.22
Total	518,675	100.00	537,791	100.00	2,210,732	100.00	2,323,864	100.00

Dollar Volume of Sales*

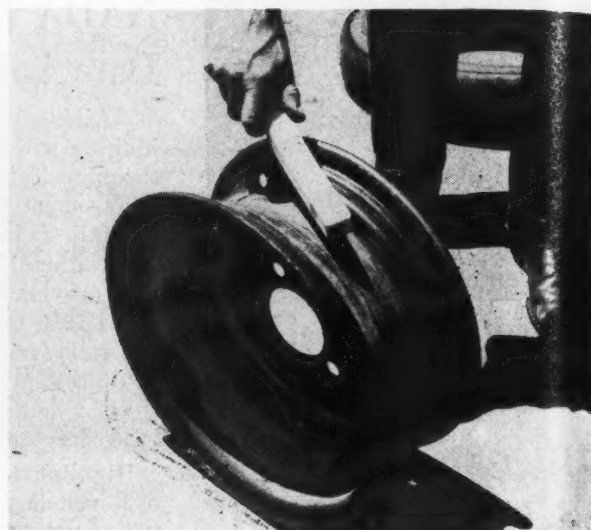
Price Group	May				Five Months			
	1954	1953	1954	1953	1954	1953	1954	1953
Under \$2,000	\$583,243,980	51.21	\$522,243,006	45.97	\$2,372,888,825	50.47	\$2,243,304,179	45.29
\$2,001 to \$2,500	300,127,159	27.28	340,176,401	29.95	1,307,307,135	27.81	1,481,190,558	29.50
\$2,501 to \$3,500	159,240,280	14.47	191,283,258	16.84	660,506,958	14.05	877,580,795	17.72
Over \$3,500	77,500,496	7.04	82,272,884	7.24	360,823,859	7.67	370,820,057	7.49
Total	\$1,100,111,915	100.00	\$1,135,975,549	100.00	\$4,701,526,377	100.00	\$4,952,975,589	100.00

*—Calculated on basis of new car registrations, as reported by R. L. Polk & Co., in conjunction with advertised delivered price at factory of four door sedan or equivalent model. Does not include transportation charges or extra equipment.

†—New registrations of American made cars only. Does not include imported foreign cars.



1. Using a bead breaker prevents damaging sealed surfaces of the bead.



2. A wire brush is used to remove all rust and rubber particles.

Let's take the Mystery out of Tubeless Tires



by Jack Montgomery
Technical Editor

Experts tell us they're here to stay, so
now is the time to learn the procedures
for repairing and installing tubeless tires

AS the trend toward tubeless tires gains momentum, Packard is the first to offer them as an option at no extra cost. Tubeless tires are claimed to provide a smoother ride and to run cooler than conventional tires. Their lighter weight and improved flexibility, advantages which can be had without a price penalty, will increase their popularity in years to come.

A number of MOTOR AGE readers have inquired as to the methods of servicing tubeless

tires. The following article and accompanying pictures should answer some questions on this subject.

Tires are mounted and dismounted in the conventional manner, except for installing the valve stem and preparing the rim flange.

Examine all rim flanges for sharp dents, then straighten and file them smooth, as necessary. Clean the flanges with steel wool to remove all

(Continued on page 80)

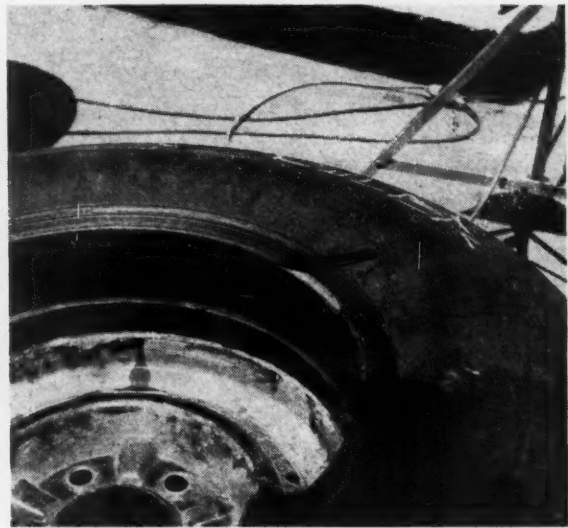
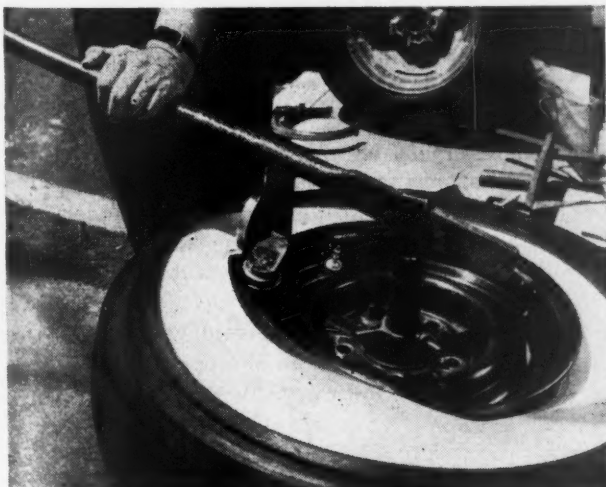


3. Install the valve stem using the proper gaskets and washers.

5. Rolling cold patch to remove air bubbles.



7. A special tool, shown in position for mounting the tire, reduces effort in installing or removing.

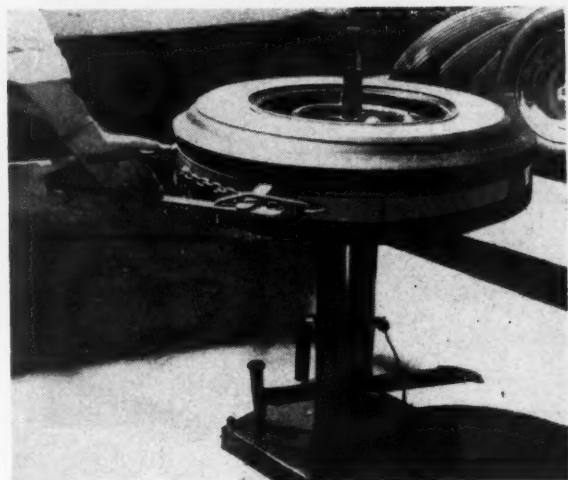


4. This torn bead is the result of using improper tools and being careless.

6. Moistening the bead before installing the tire.

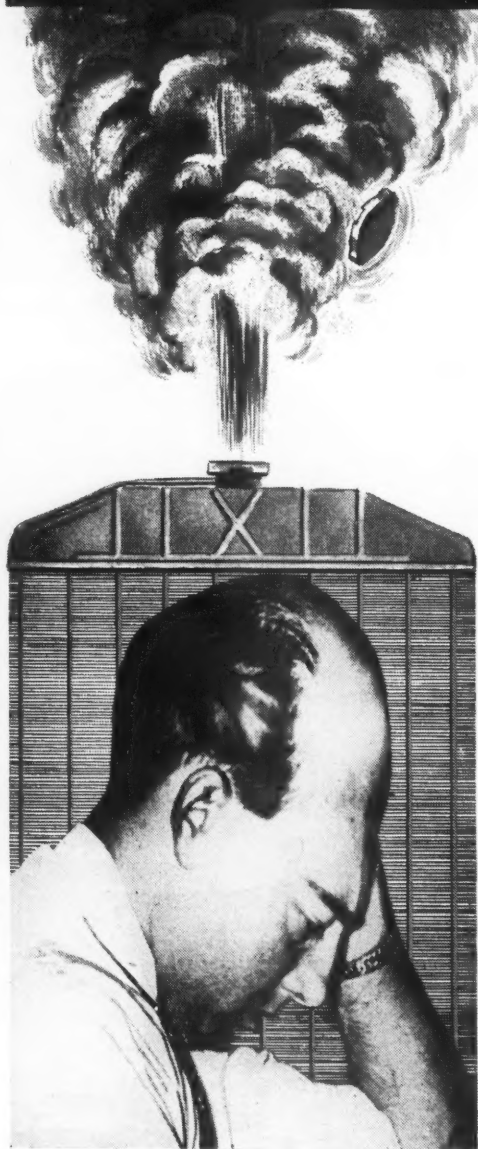


8. Below. This clamp is designed to spread the beads against the rim while applying air.



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OVERHEATING HEADACHES



THERE are many factors which can cause engine overheating and each one should be carefully considered when trouble arises. The most common, of course, would be a slipping or broken fan belt, a stuck thermostat, radiator air passages clogged, restriction in the radiator core, hoses or water jacket passages badly corroded. Other causes would be improper ignition timing and improper carburetor adjustment, exhaust manifold valves stuck, shortage of engine oil, or improper lubrication due to internal conditions. Also dragging brakes, and in some cases the automatic transmission, could cause the car to run hot due to excessive load or slippage. A sticking thermostat will prevent the cooling system from functioning properly. Test the thermostat for correct opening temperature by immersing the unit and a thermometer in a container of water over a hot-plate. Then compare thermometer reading with reading stamped on thermostat. While heating the water, do not let the thermometer or thermostat rest on the bottom of the container as this will cause them to be at a higher temperature than the water. Agitate the water to insure uniform temperature of the water, thermostat and thermometer.

Check the exhaust manifold valve for sticking. A valve sticking in the open position will cause slow engine warm up when cold. A valve

(Continued on page 88)

... and what to do about them.

This article offers points to watch for when a car comes in steaming after a hard, hot run

Radiator Water Flow Data

YEAR	MODEL	WATER FLOW (Gal. Per Min.)
Buick		
41-48	60, 70, 90.....	29
41-49	40, 50 (except 49 Model 50 w/dynaflow).....	23
49	50 w/dynaflow.....	27
49-52	70.....	31
50-54	40, 50 (except 53-54 Model 50)....	23
53-54	50, 60, 70, 100.....	31
Cadillac		
41-48	All.....	32
49-54	All.....	28
Chevrolet		
41-49	All.....	20
49-54	All.....	21
Chrysler		
41	6.....	20
42-54	6 (except late 49-50 w/3" core)....	23
49-50	6 (late 49-50 w/3" core).....	25
51-54	V-Eight.....	29
De Soto		
41-48	6.....	22
49-52	6 (except late 49-50 w/3" core)....	23
49-50	6 (late 49-50 w/3" core).....	25
53-54	6.....	18
52-54	V-Eight.....	29
Dodge		
41	6.....	17
42-54	6 (except early 49-50 w/2½" core)..	22
49-50	6 (early 49-50 w/2½" core).....	20
53-54	V-Eight.....	22

Ford

41	V-8.....	50
41-51	6.....	32
42-48	V-8.....	54
49-52	V-8.....	47
52-54	6.....	36
53	V-8.....	42
54	V-8.....	36

Hudson

41	6.....	21
41	8.....	24
42-47	6.....	23
42-47	8.....	28
48-54	6, 8.....	34

Kaiser-Frazer

47-54	(except 1948).....	20
48		18

Lincoln

41-48		58
49-51		68
52-54		38

Mercury

41		50
42-48		54
49-51		66
52-53		52
54		36

Nash

41-48	All.....	18
49-54	All.....	22

Oldsmobile

41	8.....	31
41-48	6.....	23
42-48	8.....	25
49-50	All.....	32
51-54	All.....	27

Packard

41-47	6.....	25
41-47	8.....	32
48-54	(except 49-50 Super 8).....	37
49-50	Super 8.....	42

Plymouth

41-48		22
49-54	(except early 49 w/2½" core).....	20
49	(early w/2½" core).....	22

Pontiac

41-54	6.....	23
41-49	8.....	27
50-54	8.....	31

Studebaker

41-46	Champion.....	18
47-48	Champion.....	24
41-48	President, Land Cruiser, Commander	27
49-52	Champion.....	26
49	Commander.....	30
50	Commander.....	34
51-52	Commander.....	32
53-54	Champion, Commander.....	22

Willys

41-54	All.....	20
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Oil Level Is The Safety Level In Power Steering Units

Do your customers a good turn by checking power steering frequently. This article includes complete service data

OIL level in the power steering reservoir should be checked at least every 1000 miles or 30 days. Bear in mind that cleanliness is an important factor and extreme care should be taken to prevent dirt from entering the reservoir when the cover or dipstick is removed.

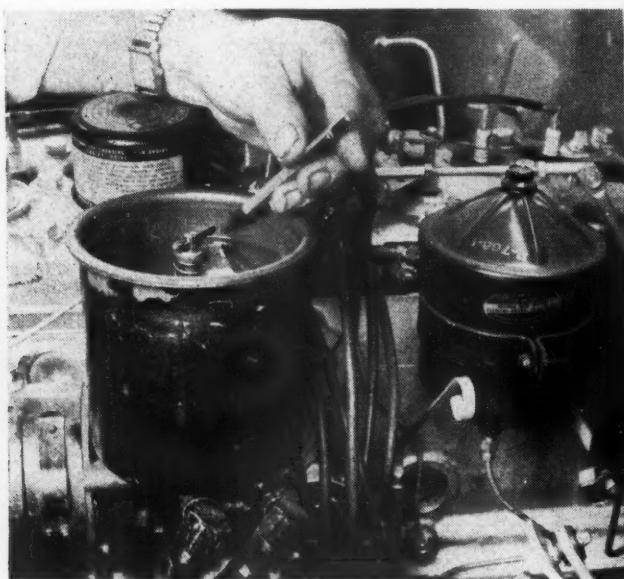
To check the oil level of many power steering

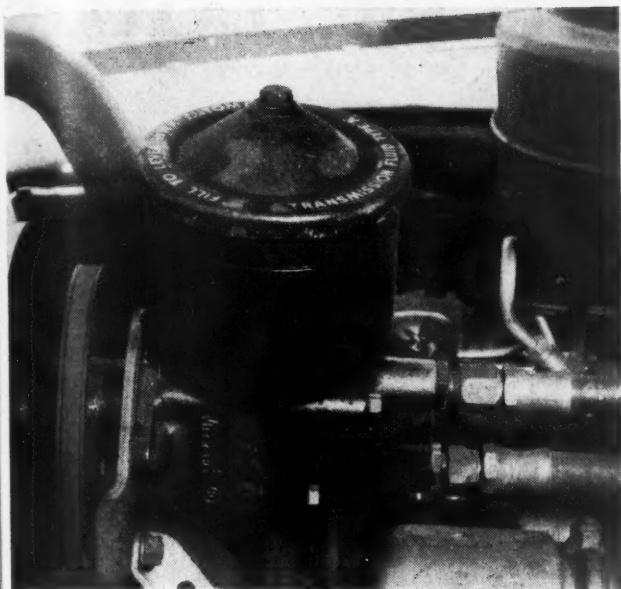
units, wipe the reservoir cover clean, remove the cover clamp screw or cover retaining bolt and remove the cover—or remove the dipstick on models so equipped.

Oil in the reservoir should come up to the full mark which is embossed on the inside or outside of the reservoir housing and is approximately one inch from the top or as indicated on model

Checking oil level on a Plymouth installation. Full mark is indicated on the reservoir.

A dipstick is used with some Bendix units, as shown on this Ford installation.





Location of the reservoir on a Saginaw power steering installation.

equipped with a dipstick. Add oil as necessary. If the system is very low, add oil and bleed the system as follows: Start the engine and rotate the steering wheel back and forth from extreme left position to the extreme right position several times to expel the air within the system. Turn the ignition off and add the proper type of oil,

(Continued on page 128)

The Ross units, as used on Dodges, are mounted on the right side of the engine.

by Ed Shea,

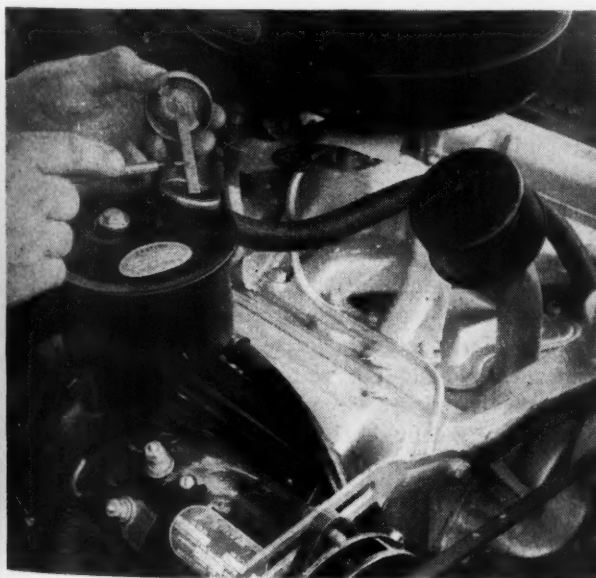
Assistant Editor

Flat Rate and Service Manual

CAR MAKE	TYPE UNIT	OIL
Buick.....	Saginaw - Gear type	Type A
Cadillac.....	Saginaw - Gear type	Type A
Chevrolet.....	Saginaw - Gear type	Type A
Chrysler.....	Gemmer - Gear type	SAE10W
De Soto.....	Gemmer - Gear type	SAE10W
Dodge, 6 cyl.....	Monroe - Linkage type	SAE10W
Dodge, V-8.....	Ross - Linkage type	SAE10W
Ford.....	Bendix - Linkage type	Type A
Hudson Hornet.....	Saginaw - Gear type	Type A
Hudson Wasp.....	Monroe - Linkage type	SAE10W
Kaiser.....	Monroe - Linkage type	SAE10W
Lincoln.....	Saginaw - Gear type	Type A
Mercury.....	Bendix - Linkage type	Type A
Nash Ambassador.....	Bendix - Linkage type	Type A
Nash Statesman.....	Monroe - Linkage type	SAE10W
Oldsmobile.....	Saginaw - Gear type	Type A
Packard.....	Bendix - Linkage type	Type A
Plymouth.....	Monroe - Linkage type	SAE10W
Pontiac.....	Saginaw - Gear type	Type A
Studebaker.....	Saginaw - Gear type	Type A
Willys.....	Monroe - Linkage type	SAE10W

Note: In localities where the atmospheric temperature is consistently lower than 10 degrees below zero drain the SAE10W and refill unit with SAE5W. If SAE5W is not available, then dilute SAE10W with kerosene.


Reservoir location typical of the Gemmer unit, which is used on DeSotos and Chryslers.

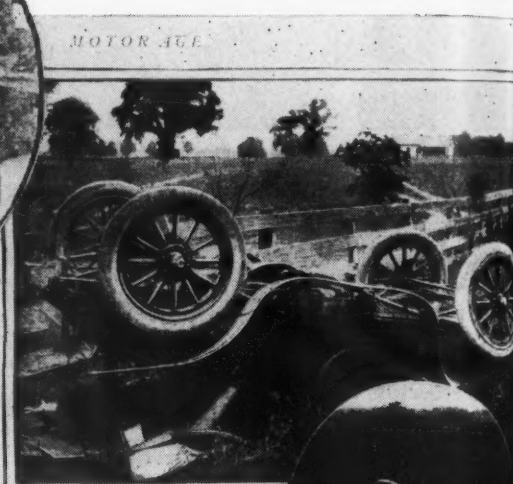


NEW YORK TO ST. LOUIS

The A.A.A. sanctioned it; Motor Age reported it; and those hearty touring pioneers

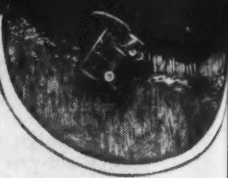


 The Motor Age Old's (left) driven by Dwight Huss. The Winton (below) and Cadillac (inset) after rolling over.



THE WINTON AFTER ITS SOMERSAULT

and the party went into the hotel. Mr. Soudes worked upon the car for a while and is alleged to have driven round the square to a side door, where the party quickly embarked again and then drove away in a hurry. Webb Jay watched them, and he wanted to round-up the White bunch at once and give chase. Calmer advice prevailed and the party was held together. Chairman Post said tonight that, providing this was done and an unfair advantage had been taken with a view to gaining any honors for the St. Louis Tour, the State Telegraph



THE OVERLAP CAR

endurance run. John Landis and his son had planned to make the trip in White cars, but Mr. Landis has been in Nashville by the illness of his son, and Mr. Wilson, who was to

Comments received by the editors of MOTOR AGE have indicated a great interest in the New York to St. Louis automobile tour of 1904, recently covered in Life Magazine. Here are some observations and quotes taken from the original articles carried in MOTOR AGE between July 25 and August 18, 1904.

THE spirit of F. Ed Spooner seemed near as we assembled some paragraphs from the pages of MOTOR AGE, vintage of 1904.

Mr. Spooner was the man who wrote with such eloquence as he journeyed with the tourists on the New York to St. Louis automobile tour.

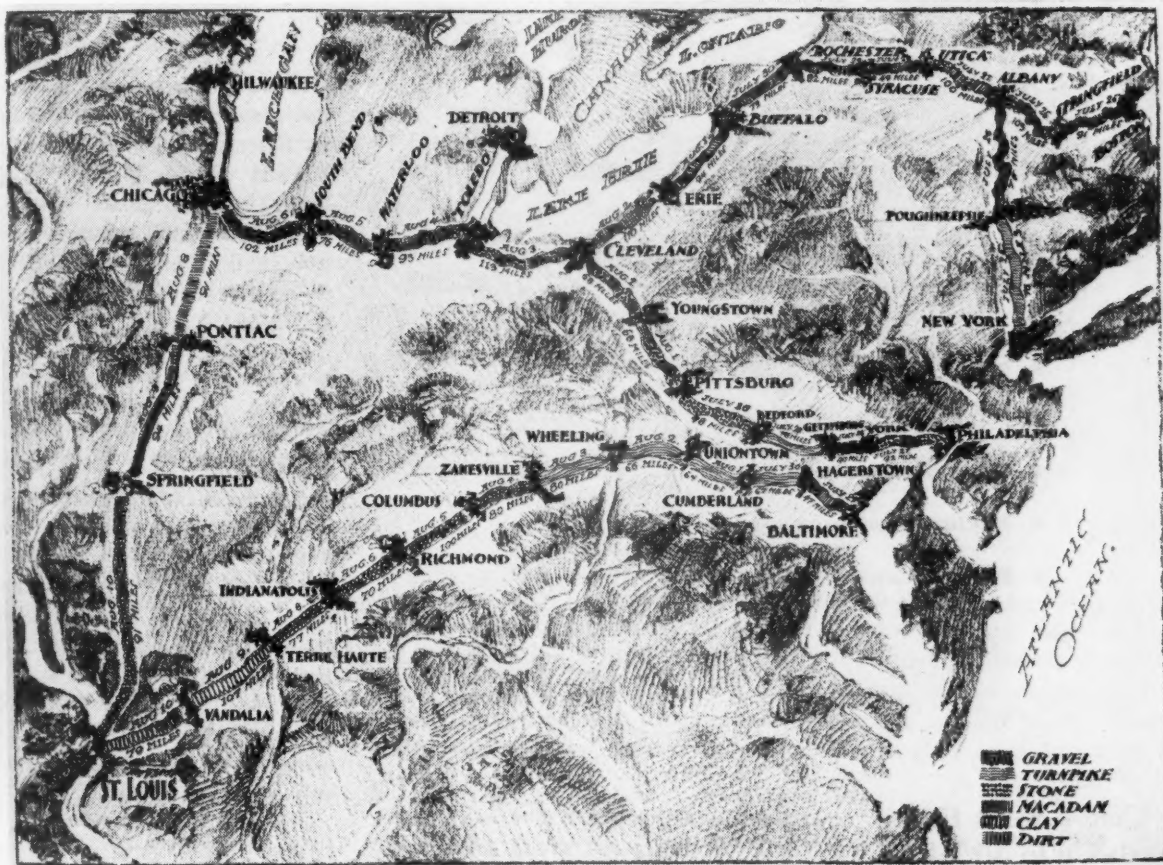
The A.A.A., automotive publications, the industry and just plain auto enthusiasts went all out to make this tour the biggest and best event of its kind in those early days. It was being run in close connection with the momentous St. Louis World's Fair and would have the eyes of a nation upon it.

The development of the industry itself depended largely on the success or failure of such ventures. Manufacturers knew this and they also knew they could get valuable car performance data on the trip.

Strangely enough, the defects of the cars were not the major source of griping among the drivers. For the average car was far superior to the average road. "This touring movement," MOTOR AGE said, "may be developed into one of

50 YEARS AGO

did it with their cars chugging merrily away over hill, dale and sometimes chickens



Bird's eye view of the route followed by the 1904 A. A. A. St. Louis World's Fair Tour.

by Richard C. Rittenhouse, Associate Editor

the greatest good roads movements the country has ever known."

Here we have the impetus (aside from fun) that caused these drivers to load their cars with parts, bundle up in dusters and rattle through the dust and mud to St. Louis.

The trip to St. Louis was prepared in advance by the A.A.A. Each day's drive would cover approximately ninety miles. No maps were available, so local motorists in each area spread con-

fetti on the correct roads as a guide for the tourists.

The route was judged to be 1338 miles from New York, through Utica, Syracuse, Buffalo, Cleveland, Chicago and south to the Fair.

In New York seventeen cars lined up for the start. There was a Pope-Hartford, four White Steamers, a Special Peerless, a Haynes-Apperson, an Elmore Pathfinder, a Cadillac, a Darrac-

(Continued on page 98)



by Jack Montgomery, Technical Editor

- Stude Champ runs hot
- Pepping up a Pontiac
- Chevrolet has a miss
- Engine is burning oil
- Ford breaks second gear

Stude Champ Runs Hot At Speeds Up to 50 MPH

I have a 1948 Studebaker Champion that runs too hot. While driving around town, the temperature stays at a normal 175°, but in conventional driving up to 50 mph, it creeps up to 195°. While in overdrive from 35 mph up, it goes to 200°-212°. So far, the radiator has been cleaned (block not flushed this time), the thermostat removed, a cooling system cleaner used, the block back flushed (solution is still dirty and sludgy), a rust inhibitor used five times, the timing checked three times, the temperature gage replaced and recalibrated, plain and pressure type radiator caps used, and the thermostat changed six

times. At present it has a 160° poppet type stat, along with permanent anti-freeze. I very seldom have to add water. The engine is in good condition.

*F. N. Fitzgerald
Arnold Motor Supply
Boone, Iowa*

I AM inclined to believe that the trouble is in the block. I think you'll find that the block contains heavy rust-sludged deposits. To remove, mix up a solution, using 10% hydrochloric acid; disconnect the upper and lower radiator hoses and fill the water jacket. Plug up the inlet and outlet connections and leave the solution sitting for about twelve hours. Drain and flush with clean water and install a good neu-

READERS'

TROUBLE

tralizer. Also, reverse flush the radiator core to remove any loose particles that may have been pushed up out of the block. Check the lower hose to make sure that it doesn't collapse when under suction, and it might be a good idea to remove the water pump to examine the impeller.

Suggested Remedy for Pontiac that Lacks Power

I have a 1950 Pontiac that is a little short on power. I have been advised to set the timing chain ahead one tooth (speedometer reading 45,000 miles) and to plane the cylinder head. Do you think it should be retimed; how much can I have the head planed and still use regular gasoline? How much can I plane it and still use premium gasoline. I get about 16 mpg.

*Roy Christianson
Roy Christianson Garage
Kenaston, N. D.*

I CAN'T see setting the timing ahead unless the chain is badly stretched, in which case a new one should be installed. Setting them a tooth ahead would just make the engine ping and be sluggish. If this job is equipped with a standard head you can plane .030 inch off it for regular gas, and .065 inch for high test.

Chevrolet Engine Has Intermittent Miss

A 1951 Chevrolet PowerGlide has an intermittent miss at 900 rpm

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

CLEARING HOUSE

SHOOTING PROBLEMS

and above. We have ground the valves and put in new springs, valves, guides and hydraulic lifters. The distributor and carburetor have been checked and three different sets of spark plugs have been installed. We checked the distributor cap and ignition wires for cracks. The coil was checked and is OK.

Roy Weed
Canby, Oregon

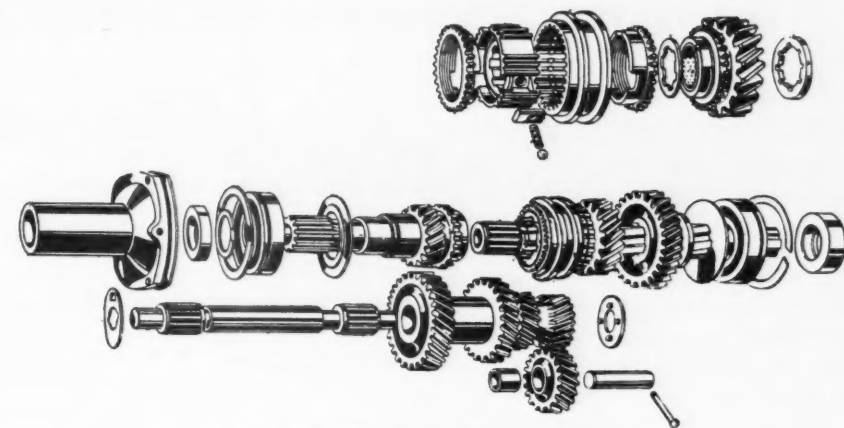
THIS condition should be the result of play in the distributor vacuum advance mechanism, spark plugs set too close or a carburetor float level set too low. In some cases ignition timing may be too far advanced. I would suggest checking the above items and setting them to factory specifications.

Engine Still Uses Oil After Overhaul

The oil consumption in my 1948 Studebaker is bad, even after an overhaul. I put in new rings, inserts and seals, but it didn't stop. The taper is only about 8 thousandths.

Edward Haas
Haas Auto Repair
Marysville, Kansas

IT seems to me that you will have to take this engine apart once again, but first it would pay to make a few checks. Observe the smoke color coming from the exhaust; if it is gray and dense around 40 mph, oil is getting into the combustion chamber. It might be coming up the valve stems due to worn guides, or excessive oil throw off from the bearings. Check for external leaks



Exploded view of a Ford transmission

at the front and rear oil seals and valve chamber. Also, a faulty automatic choke or a rich mixture can cause the oil film to be washed from the cylinder walls and cause crankcase dilution. Check for a leaky fuel pump.

If the above checks don't prove anything, remove the oil pan and make an oil pressure test to check the oil flow to the camshaft and bearings. The flow should be uniform throughout. I would suggest that you have the piston skirts expanded, as the pistons may be rocking in the cylinders, preventing the rings from controlling the oil.

Make sure the engine is running at normal operating temperatures and that the oil pressure is set at manufacturer's recommendations.

Can't Keep Second Gear in Ford, Replaced Twice

Could you tell me what could be the trouble with a 1947 Ford trans-

mission that I have had down two times and second gear has been out both times. The car ran 78 miles with a rebuilt transmission before it gave out. It always takes from five to six teeth when it goes.

Roy Allen
D. & D. Auto Service
Manhattan, Kansas

IT is unusual for a Ford transmission to knock off teeth from the second speed gear, as this gear is in constant mesh. I would suggest checking with the driver of the car to make sure that he isn't mistreating it. Also, make sure that the counter shaft and bearings are fit properly when assembling the unit and that there is no misalignment.



MOTOR AGE FLAT RATE AND SERVICE MANUAL

New PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING THIS PAGE

383. Spring Stabilizers

Radiator Specialty Co.: The Rub-R-Ride coil spring stabilizers, it is claimed, provide a method of repairing sagging coil springs. The unit can be installed without dismantling any part of the car, the maker states. Made of a grease resistant rubber compound, the stabilizers are said to reduce uneven tire wear, tire squeal and sway on tires. Two types are made for the front end and one for the rear.

384. Wheel Balancer

Bear Mfg. Co.: This company is now producing an "On A Car" balancing unit with built-in weight and tool trays, a vibration indicator and a weight spinning pattern, showing the operator whether he is adding or subtracting weight. The car wheels are balanced by this machine without removing them from the car. The maker

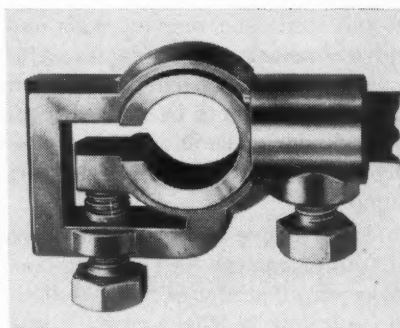


claims that bent rims or wheels with run-out do not affect the centering or accuracy of the balancer.

It is further stated that the unit is equipped with a mercury switch allowing the operator to start the spinner with forward body pressure and shut off the spinner with reverse body pressure. This allows complete freedom of the operator's hands, with all of the work done in a seated position.

385. Battery Connector

O. H. Thomas Co.: The battery terminal connectors recently mar-

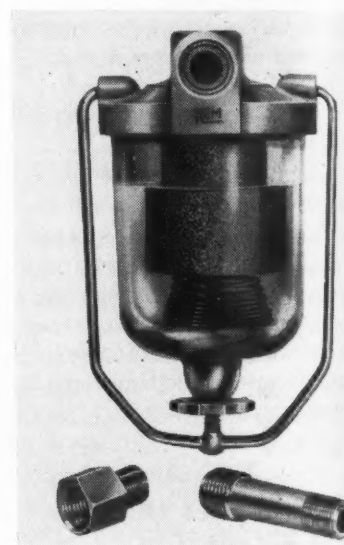


keted by this manufacturer are said to be non-corrosive and non-freezing. The item is made of lead-antimony alloy and is called a Jiffy Solderless Terminal Connector. It features a construction which makes the connector easy to put on or take off and prevents locking or freezing.

386. Fuel Filter

Kem Mfg. Co.: One of the main features of the Kem fuel filter is the micro-bronze element which blocks passage of foreign particles to the carburetor. Because of the filtering area of 5.7 square inches, there is no restriction of fuel passage the company claims. This

element, it is further stated, will not shed particles into the filtered fuel, or crack or crumble from



vibration. It is easily cleaned, and is not affected by water, alcohol or aromatic fuels.

The fuel filter is complete with fittings to facilitate installation.

387. Vacuum Cleaner

Air Sweep: This company's vacuum cleaner attaches to regular filling station and garage air hoses, reverses the air flow and creates a powerful suction strong enough to clean the ash trays and floor mats of a car.

This cleaner is extremely light (approximately 5 lbs. complete), trouble-free with no moving parts, and comes equipped with a hanger that holds the bag out of the way on a gas island or shop wall—all the operator has to handle is the nozzle, according to the maker.

USE THESE

Free & Easy

INQUIRY CARDS

The Inquiry Card—How It Works

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

When you want more free information on any of these products, simply mark a circle around the same number on the postcard as appears under the item described. You may circle as many items as you wish. Use either or both cards. Separate information will be sent to you on each item. Be sure to give your full name and address.

New Literature

388. Machine Catalog

South Bend Lathe: This company's new general catalog illustrates and offers full specifications on their many types, models and sizes of metalworking machinery for industrial production, toolroom and maintenance.

Subject matter covers a complete line of precision toolroom lathes and engine lathes.

389. Tester Manual

Imperial Brass Mfg. Co.: Simple instructions on the use of battery hydrometers and anti-freeze testers together with easy-to-understand technical data are contained in a new manual

(Continued on next page)

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE

P. O. Box 76, Village Station, N. Y. 14, N. Y.

8/54

Please send me further information on the New Products, the code numbers of which I have circled below

- | | | |
|-------------------------|---------------------------|-------------------------|
| 383. Spring Stabilizers | 393. Power Brush Catalog | 402. Plastic Hammer Cap |
| 384. Wheel Balancer | 394. Plastic Sealer | 403. Hangar Iron |
| 385. Battery Connector | 395. Brake Fluid | 404. Charger Tester |
| 386. Fuel Filter | 396. Torque Arrester | 405. Transmission Tool |
| 387. Vacuum Cleaner | 397. Hood Lock | 406. Thermostat |
| 388. Machine Catalog | 398. Dealer Package | 407. Tool Protector |
| 389. Tester Manual | 399. Power Brake Cylinder | 408. Parts Cleaner |
| 390. Jack Catalog | 400. Oil Filter Signal | 409. Camshaft Gear Kit |
| 391. Abrasive Digest | 401. Utility Light | 410. Work Light |
| 392. Welding Book | | |

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| 392. Welding Book | | |

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New Products

Continued from Page 53

presently being distributed to the automotive service industry.

It is said that this manual was developed as a constructive help to service station operators who are faced with the problem of training attendants in the use of equipment.

390. Jack Catalog

U. S. Air Compressor Co.: A new 24-page catalog, containing illustrations, specifications and complete descriptions of the full line of U. S. automotive roller bearing lifts has just been issued by this company.

One feature of this new catalog is a flap showing full details of both the U. S. full hydraulic and semi-hydraulic jack construction which, when folded out, always remains in full view with the pages of the main section of the catalog.

391. Abrasive Digest

Clover Mfg. Co.: A revised edition of the handbook and digest of coated abrasive technology has been made available by this company. The 36-page booklet contains technical information on the use and care of coated abrasives.

392. Welding Book

Aluminum Co. of Amer.: The latest developments in the science of welding aluminum are described in the 176-page book titled "Welding Alcoa Aluminum."

Photographs and drawings are coupled with text to illustrate all the practical methods for welding aluminum. These include torch welding, arc welding—including inert-gas shielded arc welding—resistance welding, and pressure welding.

Special attention is given in the book to selection of welding method, performance of welds, welding of aluminum castings and control of welding quality.

393. Power Brush Catalog

C. W. Morris Co.: A new catalog of power driven brushes gives 16 pages of facts, application data, and product-data for such work as deburring, roughing, stripping, finishing, removing rust, and so on. Illustrated are models up to 15" diameter miniature sections down to 1-3/8"; end brushes including knot type, solid filled, and circular; and many other models for special types of production work.

(Continued on page 106)

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Pop Gets The Facts

A hot afternoon plus a reluctant operator add up to a stalling mower until Pop O'Neill finds the trouble and gets them both working again



The kid ignored the wrath of his father as he stalked across the yard kicking the tops of unwary plantain . . .

IT ALL started when Ellington Links told his son, "You cut the grass this morning and I'll take you fishing with me this afternoon when I get off work. Tommy is going with us, but he'll be around by noon."

Son agreed with the second part. The earlier proposition was not altogether palatable. In fact it was downright revolting. He watched his father gesticulate menacingly as he backed down the driveway. "Now get a move on and don't try any more of that souping up my power mower."

The kid went to work. But it was hot and a blazing yard cringing under an August sun does not provide portal to portal. The incentive was there all right, but the spirit was in the hammock . . .

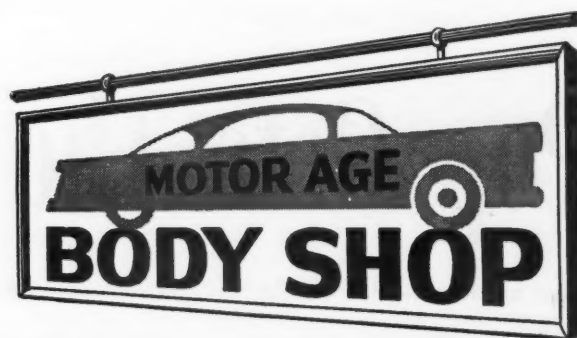
Ellington returned a half hour early, primed to the bait pail for the fishing trip. The boy was

out in the middle of the acreage between the mower—that is to say between the mower pieces. For each part that would come off handily was laid carefully in the long grass where it could be conveniently slipped back—or lost—whichever came most handily. And across the front, in letters twenty feet long were the initials K L, cut nearly as you please in four inches of grass. This was more fun than fishing.

The kid ignored the wrath of his father as he stalked across the yard kicking the tops off unwary plantain and counting furiously under his breath. He took the offensive. "This thing needs a new carburetor," he said, nonchalantly as a 12-year old can say it when he's smeared to the last freckle with grease and oil. "Been having trouble with this mower all morning. No power."

(Continued on page 68)

by Arthur H. Nellen, Jr., Managing Editor



Flocking

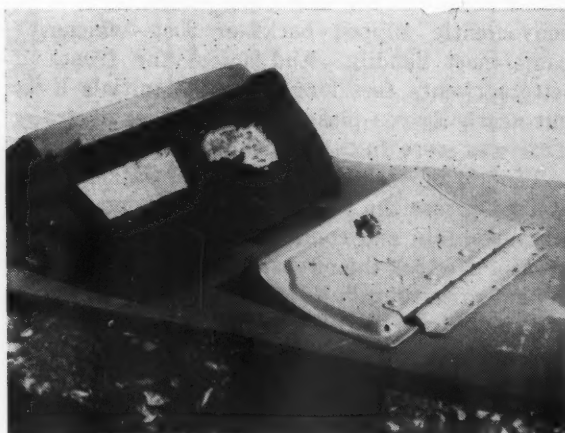
Adds A Finished Touch

Renewing a car's interior is often as important as repainting the outside.



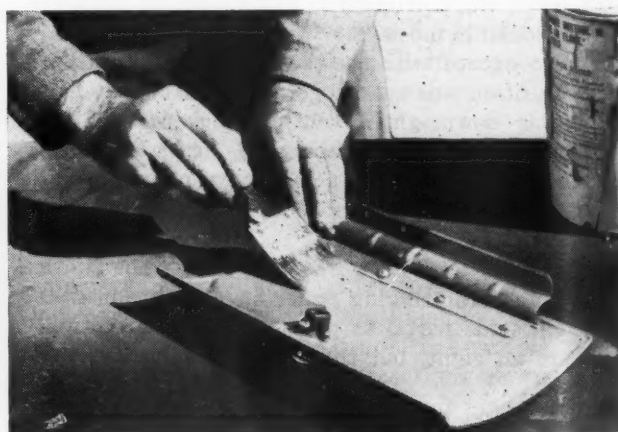
The flocking gun and two types of flock (hair type on the left, rayon type at right) are shown above.

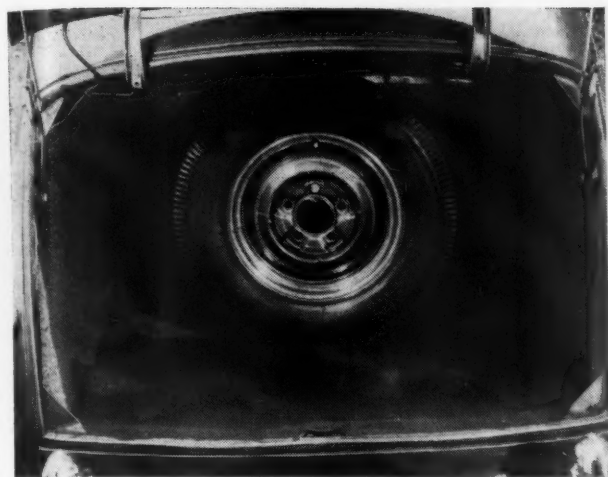
The marred and dirty glove compartment is shown below. It is not usually necessary to remove parts.



COMplete refinishing of a car is a popular and profitable operation, but most body shops shy away from interior work. Beyond the installation of a set of seat covers or cleaning of upholstery, the interiors are usually allowed to deteriorate until the car is in a fairly dilapidated condition. Interiors can be put into "like new" condition by flocking, a relatively simple process which is applied all too seldom in the automotive field. A surface that has been

A light coating of special glue is applied to the metal parts prior to spraying the flock.





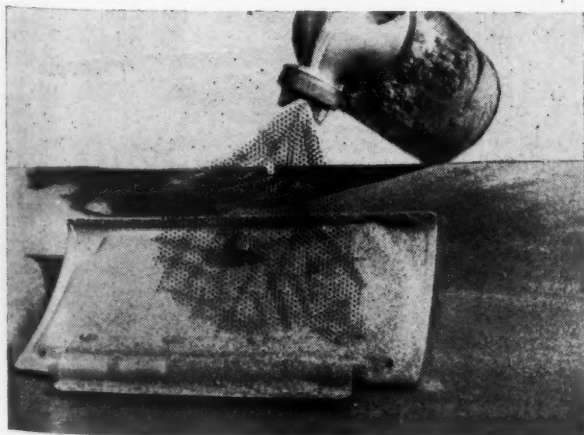
Trunk compartment can be made to look like brand new with flock. Rubber paint on tire and floor mat finish the rejuvenation.

Here are some "rejuvenation" hints

flocked has a suede or velvet-like appearance. Flocking is available in several colors and will stand up indefinitely, so long as it is not put on an area which is subject to abrasion or wear.

Glove compartments, head linings, trunk interiors, door kick pads, dash panels and other such areas can be made to look as good as—or better than—new by applying flock. The cost is quite reasonable and the results are most gratifying. Here's how it fits into the picture.

Flock is sprayed on the wet adhesive. Because of overspray, a wide working surface makes easier cleanup.



A car about five years of age, for instance, may have relatively low mileage and be in good mechanical condition, but the body may have been abused. The body shop operator can sell the owner a complete paint job, after having straightened the dents. A good set of seat covers can be installed, but the interior still doesn't carry out "the new car look" imparted by the new paint job. The kick panels are dirty and scuffed, the dash and glove compartments are scratched and dingy, the shelf behind the rear seat is discolored and scuffed, the trunk looks like a neglected corner of someone's basement. Usually, a car is renewed on the outside only.

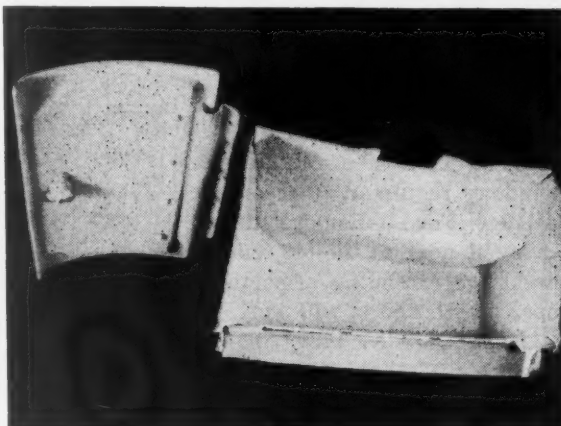
Flock is the answer to a great deal of interior rejuvenation. After the exterior has been re-finished, the window moldings can be removed and sprayed with new enamels which give a "hammered finish." This can also be used on heaters and other parts which have become scratched or torn through use. Then the glove compartment interior, kick panels, head lining and trunk interior can be flocked. Also, grain-ing kits and decals are available for interior reconditioning.

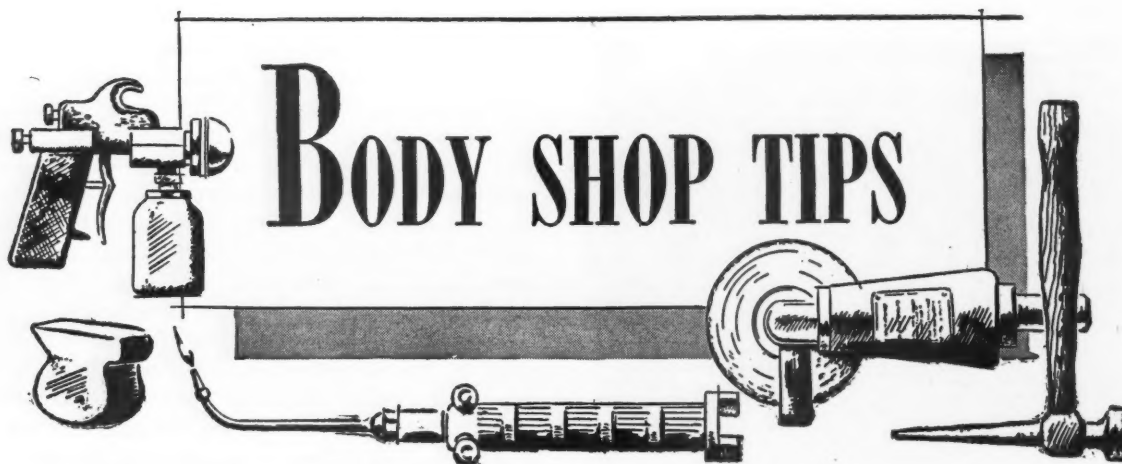
The accompanying photographs show the method of flocking automotive parts. An adhesive is applied in fairly heavy coats, then the flock is applied by a special spray gun, which blows the fibrous "dust" so that it imbeds in the adhesive. After a few hours of drying, the loose particles can be blown or vacuumed off.

Two types of flock are available: hair type for trunks, kick panels and areas which will take more abuse; and rayon type, for glove compartments, rear window shelves and spots which are

(Continued on page 124)

Finished job can be cleaned with a vacuum cleaner to remove loose particles. Note new-like finish.





BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Bowl Cover Makes Good Masker for Headlamps

To save taping headlamps when painting, I remove the headlight door and place a plastic bowl cover over the sealed beam retaining ring. The same cover can be used countless times. *Edward Wolfert, Jr., Wolfert's Body Shop, 18 Windmill Lane, Southampton, N. Y.*

'40 Ford Window Regulator Adapted to '39-40 Mercurys

If you can't buy a '39 or '40 Mercury window regulator, use one from a 1940 Ford. Remove the old one, lay it next to the '40, cut and reweld the extending arms to the proper length and it will work. *Thomas Kaki, 7807 N. Yale, Spokane, Wash.*

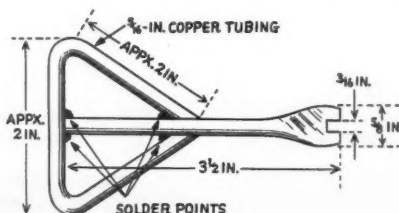
Grease Used to Spot Proper Hole Spacing

Many new car dealerships have

their own name plates to be installed on cars that they deliver. Usually these plates are held on with speed nuts that fit over pegs on the back of the plate. To locate the spots where the holes are to be drilled on the car I put a little grease on the pegs and press them against the metal. The grease will stick at the points of contact and the spacing of the holes, when drilled, will be correct. *Joseph E. Young, Hover Motors, Inc., Federal and Speer Blvds., Denver, Col.*

Homemade Tool For Removing Speed Nuts

We've developed a tool for removing medallions and name plates



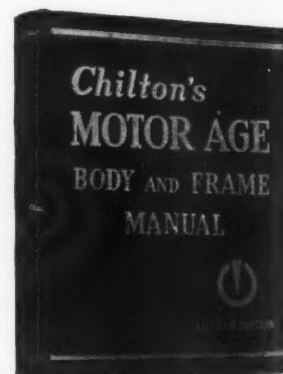
that are held in place by speed nuts. This tool, made of an old screwdriver and a length of copper tubing, save time and eliminates the need to buy new name plates. To use the tool we place it in the palm of our hand and with a slight rotating motion work it under the speed nut. Then we place one finger on the nut and continue to rotate the tool from side to side. The nut will come off very easily. The tool saves us lots of time and headaches. *Malcolm E. Spangler, Box 481, Shelby, N. C.*

Wrap Masking Tape Around Steel Wool to Prevent Cuts

To avoid having your fingers cut by steel wool while tinning, take a new steel wool pad and wrap masking tape around the part which will be handled. This will give a mushroom effect to the pad and make it easy to handle. *Paul Korzinzki, Paul's Garage, 990 Goffle Rd., Hawthorne, N. J.*

Grinding Disc Material Takes Place of Flint Torch Lighter

To repair an old broken acetylene welding lighter, cut a piece of No. 36 grinding disc material about 1/2-in. wide and 1 1/2-in. long and make the holes the right distances apart. Slip this on the lighter handle where the old flint base was broken off. *Donald Hartzell, Millwood Body Shop, Rt. 1, Etna Green, Ind.*



Other valuable information of the type presented each month in The BODY SHOP is available in Chilton's Motor Age Body and Frame Manual.

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of July 26, 1954.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK					DODGE†					KAISER					PACKARD (Continued)				
Special 40	2010	197	2207	3690	Mdowbrk. 6	1816	142	1958	3125	Special	2141	193	2334		Packard				
Sedan, DeL., 2d	2084	201	2285	3735	Club Coupe	1855	145	2000	3170	Club Sedan	2192	197	2389	3210	Sedan, 4d	3068	276	3344	3955
Sedan, DeL., 4d	2102	203	2305	3740	Coronet 6					Sedan, 4d					Coupe	3517	310	3827	4065
Riviera Cpe.	2343	220	2563	3810	Club Coupe	1933	151	2084	3165	Manhattan	2404	213	2617		Patrician, 4d	3575	315	3890	4190
Conv. Cpe.	2900	263	3163	3905	Sedan, 4d	1958	153	2111	3235	Club Sedan	2453	217	2670	3375	Conv. Cpe.	3618	317	3935	4290
Est. Wagon					Suburban	2044	160	2204	3185	Sedan, 4d	3368	300	3668		Sedan, 8p	5175	525	5610	4650
Century 60					Sierra, 2 seat				3430	Darrin					Limousine	5500	550	5960	4720
Sedan, DeL., 4d	2288	232	2520	3805	Sierra, 3 seat				3435					Caribbean	5632	468	6100	4660	
Riviera Cpe.	2301	233	2534	3795	Mdowbrk. 8	1975	154	2129	3320	LINCOLN					PLYMOUTH†				
Conv. Cpe.	2700	263	2963	3950	Club Coupe	1995	156	2151	3375	Cosmopolitan	3226			4190	Plaza				
Est. Wagon	3172	288	3470	3975	Sedan, 4d					Sedan, 4d	3222			4250	Bus. Coupe	1480	118	1598	2889
Super 50					Coronet 8	2039	159	2198	3345	Sport Coupe					Club Sedan	1582	125	1707	2943
Riviera Cpe.	2387	239	2626	4035	Sedan, 4d	2059	161	2220	3405	Capri	3402			4245	Sedan, 4d	1617	128	1745	3004
Riviera Sed., 4d	2466	245	2711	4105	Sport Coupe	2185	170	2355	3310	Sedan, 4d	3549			4250	Suburban	1895	149	2044	3122
Conv. Cpe.	2701	263	2964	4145	Suburban	2312	180	2492	3400	Hardtop	3699			4450	Savvy				
Roadmaster 70					Sierra, 2 seat				3605	Convertible					Club Sedan	1682	133	1815	2986
Riviera Sed., 4d	2971	298	3269	4250	Sierra, 3 seat				3680	MERCURY					Club Coupe	1689	134	1823	2982
Riviera Cpe.	3068	305	3373	4215	Royal 8	2156	168	2324	3385	Custom	2004			3435	Sedan, 4d	1717	136	1853	3036
Conv. Cpe.	3205	316	3521	4355	Club Coupe	2178	170	2348	3425	Sedan, 2d	2057			3480	Sedan, 4d	1792	141	1933	3050
Skyline 100					Sport Coupe	2299	179	2478	3355	Sedan, 4d	2117			3485	Sport Coupe	1970	155	2125	3038
Sports Conv.	4100	383	4483	4260	Conv. Coupe	2419	188	2607	3575	Monterey					Suburban	2103	165	2268	3186
CADILLAC					FORD					Sedan, 4d	2133			3515	Conv. Coupe	2115	166	2281	3273
Series 62					Mainline 6	1400			3021	Coupe	2244			3520	PONTIAC				
Coupe			3838	4347	Business Cpe.	1496			3086	Sun Valley	2365			3535	Chieftain 6				
Sedan			3933	4330	Tudor Sedan	1542			3142	Convertible	2390			3620	Spec. Sedan, 2d	1788	182	1968	3331
Convertible			4404	4598	Fordor Sedan	1846			3338	Station Wagon	2545			3735	Spec. Sedan, 4d	1843	184	2027	3391
Coupe De Ville			4261	4409	Ranch Wagon					NASH					DeL. Sedan, 2d	1885	187	2072	3351
Eldorado			5738	4809	Customline 6	1582			3099	Metropolitan					DeL. Sedan, 4d	1940	191	2131	3406
Series 60					Tudor Sedan	1591			3080	Hardtop*	1330	115	1445		DeL. Catalina	2112	204	2316	3421
Sedan			4683	4490	Club Coupe	1628			3155	Convertible*	1353	116	1469		Spec. St. Wg., 2st.	2156	208	2384	3601
Series 75					Fordor Sedan	1932			3344	Rambler					Cus. Catalina	2174	208	2382	3421
Fltwd. Sedan			5875	5031	Ranch Wagon	2006			3513	Deluxe					Spec. St. Wg., 3st.	2207	212	2419	3691
Fltwd. Imp.			6090	5093	Country Sedan					Club Sedan, 2d	1414	136	1550		DeL. St. Wg., 2st.	2286	218	2504	3646
CHEVROLET					Crestline 6	1726			3159	Super					Chieftain 8				
Special 1500-A	1408	139	1539	3145	Fordor Sedan	1870			3184	Club Sedan, 2d	1553	147	1700		Spec. Sedan, 2d	1858	185	2043	3396
Unit, Sedan	1479	144	1623	3165	Victoria	1972			3231	Sedan, 4d	1641	154	1795		Spec. Sedan, 4d	1913	189	2102	3451
Sedan, 2d	1530	150	1680	3210	Sunliner	1972			3204	Suburban, 2d	1646	154	1800	2555	DeL. Sedan, 2d	1955	193	2148	3416
Sedan, 4d	1845	175	2020	3455	Skyliner	2133			3563	C'try Club, 2d	1646	154	1800		DeL. Sedan, 4d	2010	196	2206	3466
Station Wagon					Country Squire	1471			3142	Custom					DeL. Catalina	2122	210	2392	3491
DeLuxe 2100	1564	153	1717	3185	Business Cpe.	1587			3207	Stat. Wg., 2d	1787	163	1950	2570	Spec. St. Wg., 2st.	2226	213	2439	3676
Sedan, 2d	1615	156	1771	3230	Tudor Sedan	1613			3263	C'try Club, 2d	1787	163	1950	2550	Cus. Catalina	2244	214	2458	3491
Sedan, 4d	1625	157	1782	3185	Fordor Sedan	1917			3459	Sedan, 4d	1802	163	1965	2665	Spec. St. Wg., 3st.	2277	217	2494	3771
Delray Coupe	1950	183	2133	3470	Ranch Wagon					Conv. Sed., 2d	1817	163	1980	2590	DeL. St. Wg., 2st.	2356	223	2579	3716
Station Wagon					Customline 8	1653			3220	Cross C'try, 4d	1880	170	2050		Star Chief 8				
Bel Air 2400	1669	161	1830	3220	Tudor Sedan	1662			3201	Stat. Sedan, 4d					Spec. Sedan, 2d	2097	204	2301	3536
Sedan, 2d	1720	164	1884	3255	Club Coupe	1699			3276	Super	1929	181	2110	3025	Spec. Sedan, 4d	2184	210	2394	3536
Sedan, 4d	1883	178	2061	3300	Fordor Sedan	2003			3465	Sedan, 2d	1977	181	2158	3045	Cus. Sedan, 4d	2335	222	2557	3551
Sport Coupe	1998	187	2185	3445	Ranch Wagon	2077			3834	Custom					Cus. Catalina	2403	227	2630	3776
Convertible	2090	193	2283	3540	Country Sedan	1797			3280	Sedan, 4d	2139	193	2332	3070	DeL. Conv. Cpe.				
Station Wagon					Crestline 8	1941			3305	C'try Club, 2d	2223	200	2423	3095	STUDEBAKER				
Corvette 2000	3250	273	3523	2705	Fordor Sedan	2043			3352	Ambassador					Champion				
Convertible					Victoria	2204			3684	Super	2163	202	2365	3410	Custom				
CHRYSLER†					Sunliner	2043			3325	Sedan, 2d	2215	202	2417	3430	Sedan, 2d	1595	163	1758	2725
Wind, DeL. 6	2330	181	2511	3565	Skyliner	2204			3684	Custom					Sedan, 4d	1635	166	1801	2745
Club Coupe	2350	182	2532	3655	Country Squire	1286	118	1404	2395	Sedan, 4d	2384	216	2600	3480	De Luxe				
Sedan, 4d, 6p	2350	182	2532	3655	HENRY J	1437	129	1566	2445	C'try Club, 2d	2510	225	2735	3550	Sedan, 2d	1705	170	1875	2730
Newport	2600	201	2801	3685	Corsair					OLDSMOBILE					Sedan, 4d	1745	173	1918	2765
Conv. Coupe	2800	216	3016	3915	DeL. Sed., 2d					Series 88					Starlight Cpe.	1795	177	1972	2740
Twn. & Cty.	3056	235	3291	3955	HUDSON—Jet	1465	156	1621	2635	Sedan, 2d	2066	206	2272	3699	Conestoga	1995	192	2187	2930
Sedan, 4d, 8p	3215	247	3462	4185	Club Sedan	1665	172	1837	2715	Sedan, 4d	2126	211	2337	3719	Regal				
New Yorker 8					Sedan, 2d	1685	173	1858	2675	Holiday Cpe.	2230	219	2449	3721	Sedan, 2d	1805	178	1983	2745
Club Coupe	2940	227	3167	3910	Sedan, 4d	1755	178	1933	2710	Super 88					Sedan, 4d	1845	181	2026	2780
Sedan, 4d, 6p	2965	229	3194	3970	Super Jet	1775	179	1954	2725	Sedan, 2d	2189	221	2410	3729	Starlight Cpe.	1895	185	2080	2750
Newport	3220	248	3468	4005	Jet-Liner	1860	186	2046	NA	Sedan, 4d	2252	225	2477	3780	Starliner	2045	196	2241	2825
Twn. & Cty.	3705	284	3989	4245	Club Sedan	1870	187	2057	2760	DeL. Holiday	2448	240	2688	3775	Conestoga	2095	200	2295	2950
Sedan, 4d, 8p	4025	308	4333	4450	Wasp	2013	196	2209	3375	Conv. Cpe.	2615	253	2888	4003	Land Cruiser	2315	218	2533	3210
N. Y. DeL. 8					Club Sedan	2056	200	2256	3360	PACKARD					Commander				
Club Coupe	3130	241	3371	4005	Club Coupe	2056	200	2256	3440	Clipper					De Luxe				
Sedan, 4d, 6p	3155	243	3396	4065	Super Wasp	2203	210	2413	3490	Special	2332	212	2544	3585	Sedan, 2d	1940	196	2136	3075
Newport	3410	262	3672	4095	Club Sedan	2252	214	2466	3475	Sedan, 4d	2378	216	2594	3650	Sedan, 4d	1980	199	2179	3105
Conv. Coupe	3625	278	3903	4265	Sedan, 4d	2252	214	2466	3525	De Luxe					Starlight Cpe.	2030	203	2233	3085
Cust. Imp. 8					Conv. Brghm.	NA	NA	NA	NA	Holiday Cpe.	2570	256	2826	3851	Conestoga	2230	218	2448	3265
Sedan, 4d, 6p	3925	300	4225	4355	Hornet Spec.	2345	226	2571	3515	DeL. Holiday	2771	271	3042	3938	Regal				
Newport	4205	320	4525	4345	Club Sedan	2390	229	2619	3505	Conv. Cpe.	2963	286	3249	4193	Sedan, 4d	2080	207	2287	3120
Town Limos'n	4425	337	4762	4480	Club Coupe	2473	231	2704	NA	WILLIS					Starlight Cpe.	2130	211	2341	3095
Crown Imp. 8					Super Wasp	2203	210	2413	3490	Club									

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One to Remember

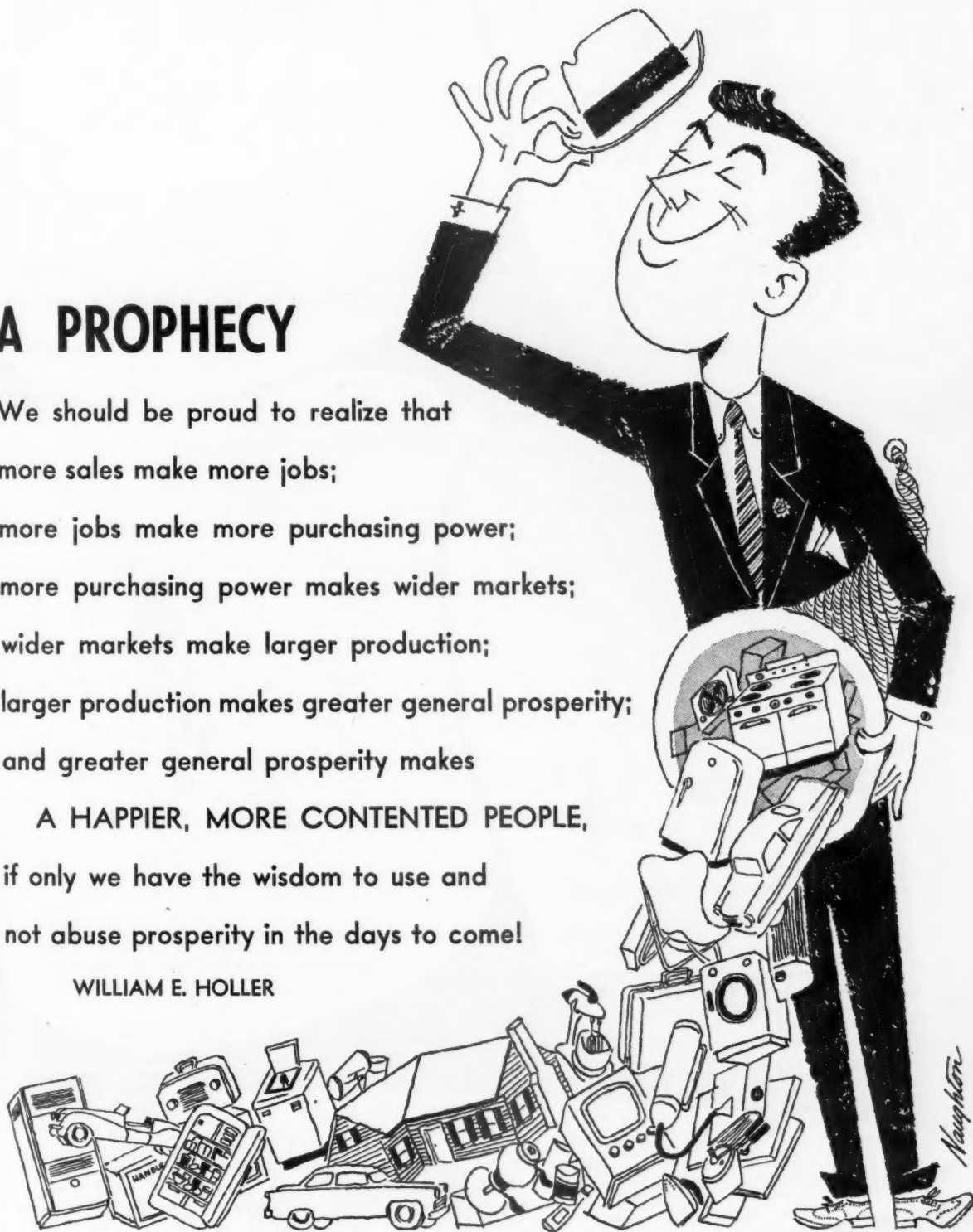
(FOR YOUR BULLETIN BOARD)

A PROPHECY

We should be proud to realize that
more sales make more jobs;
more jobs make more purchasing power;
more purchasing power makes wider markets;
wider markets make larger production;
larger production makes greater general prosperity;
and greater general prosperity makes

A HAPPIER, MORE CONTENTED PEOPLE,
if only we have the wisdom to use and
not abuse prosperity in the days to come!

WILLIAM E. HOLLER





BLARNEY.
 "... but according to the Kinsey report ..."



BLARNEY.
 "Hugo is very ambitious—someday he hopes to be rich."

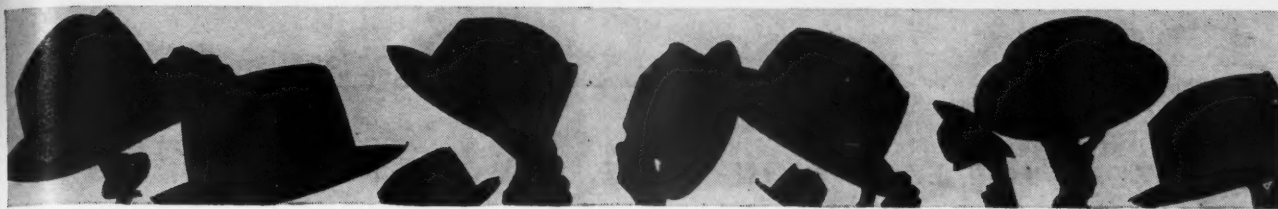


BLARNEY.
 "All I said was that I thought a rewiring and tune-up job would cost more the way prices are these days."



BLARNEY.
 "Well now let's forget about that and get busy mixing the paint for her car."





Our hats are off to our Studebaker dealers!

We always knew that Studebaker dealers rate tops as merchandisers.

But this summer, against terrific competition, Studebaker dealers and their salesmen have really been hitting the ball.

Our 100-day sales drive is now swinging into its final weeks and retail deliveries of Studebaker cars and trucks keep on reaching new highs for the year.

It's a grand feeling to know that our factory-assistance programs have been of substantial help in this success. By doing everything we can to step up profits for our dealers, we give solid meaning to our reputation as America's Friendliest Factory.

C. K. WHITTAKER

EXECUTIVE VICE-PRESIDENT
THE STUDEBAKER CORPORATION

Shop Kinks

TO MAKE A JOB EASIER ON CARS, TRUCKS AND IN THE SHOP

For The Best Kink

Published Each Month

\$25

For All Kinks

Published Each Month

\$7.50

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age.

If your Kink is used it may bring you seven-fifty or 25 dollars. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

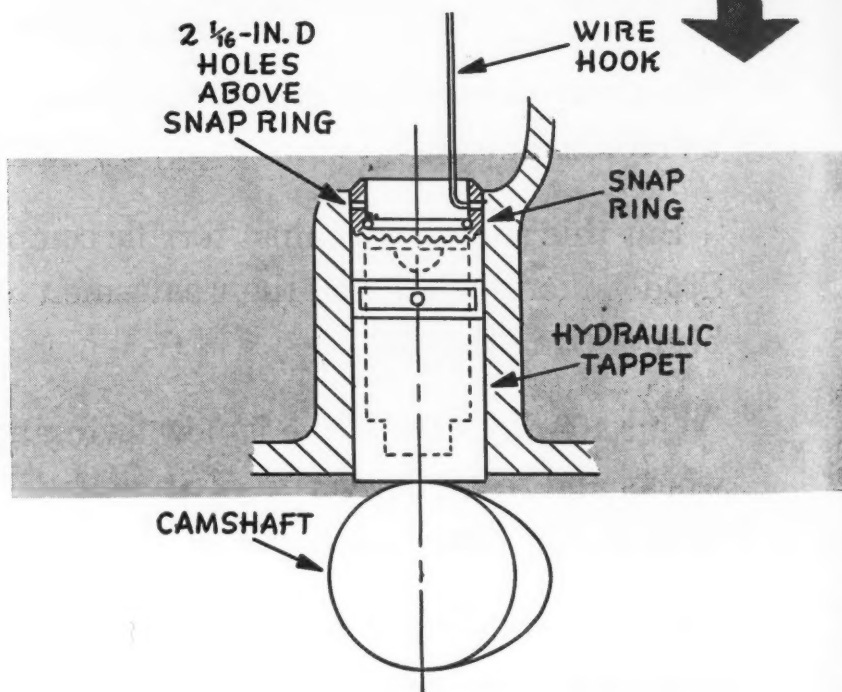
Idea For Protecting Wheel From Tire Iron Damage

We've found a way to prevent the tire tool from scratching the wheel while the hub cap is being removed. We put a short length of garden hose on the tool. The brunt of the pressure applied will be taken up by the hose which in turn cannot scratch the wheel. *Thomas F. Martin, P. O. Box 525, Mt. Airy, N. C.*

Chevrolet Drive Shaft Holds Front Inner Race

We use a 10-inch length of Chevrolet drive shaft to hold the front wheel inner race in alignment on Chevrolet trucks. This tool also acts as a lever and guide for the cup of the outer bearing.

When slid through the outer cup and over the spindle the squared front end of the tool rests against the outside of the inner bearing assembly. This holds it in alignment with the shoulder on the spindle and affords a means of driving the race in place if necessary. *John Doll, 609 S. 11th Street, Rocky Ford, Col.*



Removing Hydraulic Tappets

For quick, easy removal of hydraulic tappets from Lincoln engines we use an arrangement as shown in the illustration. When the engine is first torn down or the tappets are removed, we drill a 1/16 inch hole through the tappet body above the snap ring. When subsequent work has to be done on the tappets, they are easily removed from their socket by using a piece of wire with a hook on the end. *Louis Repko, 19488 Stahelin, Detroit, Mich.*

WHICH IS HOTTER?



Flowing molten lava?



Inside a car's engine?

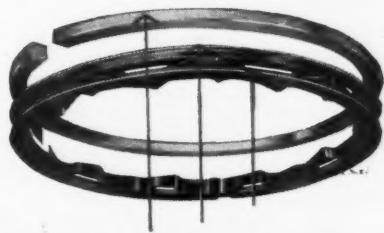
Answer: When combustion occurs, the temperatures within the cylinders of an engine frequently go as high as 4800° Fahrenheit...more than *three times as hot* as flowing volcanic lava!

Ordinary piston rings, operating where heat is highest, pressure is greatest and lubrication is poorest, can't give complete wear protection. In Perfect Circle's 2-in-1 Chrome

Piston Ring Set, BOTH the top rings AND the oil rings are plated with thick, solid chrome...giving wear protection throughout the entire area of piston ring travel!

Assure your customers thousands of extra miles of sustained power and lasting oil economy by installing Perfect Circle 2-in-1 Chrome rings. Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Canada.

Protection
where heat is
highest!



Solid chrome plating on top and bottom rings gives wear protection throughout entire area of ring travel. Rings are lapped-in at the factory, making tedious break-in periods unnecessary.

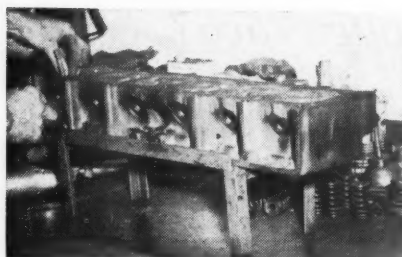
Perfect Circle

2 in 1 chrome piston rings

The Standard of Comparison

Homemade Cradle Speeds Valve Work at Bench

With the aid of several strips of angle iron and a welding tool we made a cradle to facilitate valve



work at the bench. Any type of motor head can be laid on the cradle's skeleton top, allowing easy access to all parts of the mechanism. This method is much better than working a head as it lies on the bench surface without any support to keep it from wobbling.

The cradle also gives a better working height, as well as protecting the head. Lastly, it speeds up the work. *Todd & Garren Auto Service, 319 E. Noleman St., Centralia, Ill.*

Replacing Neutral Starter Switch on '54 Chrysler

We've found a quick and easy way to replace the neutral starter switch on 1954 Chrysler cars.

The switch is reached from the rear by going over the frame crossmember. To remove the switch we use a 1 1/8 inch socket on a 1/2 inch universal joint with a 6 inch extension. *Joe Onderak, B & M Garage, Vaughn Ave. and 3rd Street, Ashland, Wis.*

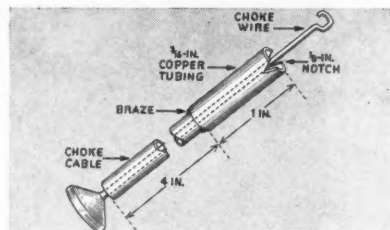
Method Found to Stop Squeak in Pinion Yoke

Many late model Fords develop an annoying squeak in the drive line when starting or stopping. This is caused by a slight amount of play between the splines of the joint yoke and the drive pinion. To solve the problem I remove the joint yoke and clean all the grease from the splines on the pinion and yoke. Then, I take a piece of ordinary blackboard crayon and chalk

the splines inside the yoke and on the pinion. Finally, I replace the yoke and the squeak is gone for good. The dry chalk acts as a lubricant and filler and lasts as long as the part itself. *D. W. McGill, Malone Motor Co., Dothan, Ala.*

Screw Starter is Made From Choke Assembly

For holding screws when working in restricted places, this tool was designed in our shop to grip the screw at a right angle to the work. It is made from an old choke wire and cable. Pull the choke wire out and cut off the cable to about 4 in. Solder or braze a 1-in. length of 3/16-in. copper tubing to the end of the cable. File a notch or half-circle about 1/8 in. deep across the end of this tubing. Insert the choke wire back into the cable and cut it off about 1 in. be-



yond the end of the copper tubing. Then form a 1/8-in. diameter hook in the end. To use, put the screw through the hook and, by means of the knob, pull the wire back until the screw is gripped in the slot in the tubing.

Water Filled Butt Cans Help Reduce Shop Fires

In my years as shop foreman in various auto repair shops I've seen quite a few fires started from carelessly dropped cigar and cigarette butts.

To help prevent these unnecessary fires we distribute water filled cans around the shop. Mechanics and visitors are requested to put all cigarette butts in the cans. *Anthony L. DeCesare, Clements Bros., 37-38 31st Street, Long Island City, N. Y.*

Loose Screw Can Cause Noise in Buick Radios

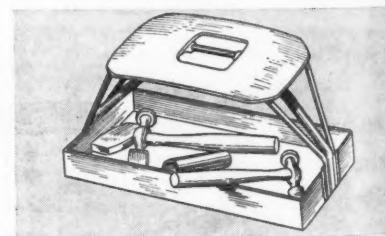
In checking complaints of excessive noise in '53 Buick radios of the push button type, we've found that one side of the antenna trimmer is grounded to a bracket which holds the trimmer in place. This trimmer is mounted to a wrap-around and ground, and the mounting connection depends upon the holding quality of a single screw. The loose screw results in vibration of the trimmer which produces the annoyance. *Stanley Clark, Box 222, East Bradenton, Fla.*

Shrinks Oversized Holes In Chevrolet Idler Arm

Occasionally the idler arm on late model Chevrolet's need new bushings. Sometimes the hole wears oversize in the arm and even though the bushing and pin is replaced it still has slack, which usually means that the idler arm needs replacing also. However, I shrink these holes by heating the arm to a dull red heat and dipping it in water. Sometimes I have to repeat this procedure but it will shrink the hole to the fit desired. *W. A. Spears, Spears Garage, Plain Dealing, La.*

Combination Tool Tray And Seat Saves Time

With this combination tool tray and work stool, our mechanics find they can shift their position from one side of the truck to the other without having to make several subsequent trips for tools. Base of the handy stool is a fairly strong metal tray. To this is welded the flattened end of a piece of pipe on



each side. Additional rods welded on each side provide added support for the seat, which is cut from steel plate.

FITZGERALD METALLIC ALUMINUM-FUSED-OXIDE STEEL ASBESTOS GASKETS

STAND the GAFF

NAPA SYRACUSE WAREHOUSE, INC.
118 HAWLEY AVENUE
SYRACUSE 3, N.Y.

March 14, 1953.

Mr. O.F. Canfield
Fitzgerald Manufacturing Co.
Torrington, Connecticut

**HERE'S
PROOF**

Dear Mr. Canfield,
We have been having some difficulty with 0463 Copper Gaskets used on the city Fleet of Twin Coach Buses.

The average mileage possible on the 0463 Copper is around 6000 before the gaskets fail. Some of the 0463 of Aluminized Steel have gone in excess of 88,000 miles before needing replacement.

Very Truly Yours,

NAPA SYRACUSE WAREHOUSE

L. L. Clark

L.L. Clark, P.A.

FITZGERALD
Metallic Aluminum-Fused-Oxide Steel Asbestos GASKETS pay off in freedom from costly gasket failures. Over 88,000 stop-and-go city bus miles before needing replacement! That's performance plus for a gasket under the extra strain of a modern high compression engine in a city bus fleet.

FITZGERALD GASKETS
will pay off for you.

also

GREASE RETAINERS • CORK GASKETS
FITZ-RITE TREATED FIBER GASKETS FOR OIL,
GASOLINE AND WATER CONNECTIONS
COMPLETE SETS FOR MOTOR REBUILDERS

THE FITZGERALD MANUFACTURING CO.
TORRINGTON, CONNECTICUT

Canadian FITZGERALD Ltd., Toronto, Canada • Branch and Warehouse, Los Angeles, Calif.; Chicago, Ill.



"What?" Ellington fumed. "You mean you've been puttering around here all morning? Why didn't you call Pop O'Neill when you found it acting up?"

"Aw, I can fix it, Pop. Just needs a little bit of cleaning—or a new carburetor—one or the other."

"Whattaya mean 'No Power'? That blamed mower worked all

right last week—last month. Well last time I used it anyway."

"You mean last year, Dad, when you used it last. But it stalls in this high grass. It's too hot to cut a lawn today."

"Hmmm," the old man sputtered. "And always in the shady places. Sure it hain't been stalling under that hammock? Now you get that

carburetor on and back to work. Tommy will be here any minute and your mother is going to raise holy blazes if we don't get the lawn in shape for her girls this afternoon."

The kid began replacing the carburetor, the sediment bowl, the spark plug, the throttle control, studying each part as he placed it into its intriguing position. "You'll see. You'll see," he said. "This motor won't work in this high grass. It needs a general overhaul. Can I do it tomorrow, Dad?"

Ellington, bending over his son's shoulder, couldn't help marveling at the mechanical genius he had fathered. He wanted to say, "You're a chip off the old block, son. Mechanical inclined, just like me," but he was mad at the kid for delaying a fishing trip. Finally the boy



**DON'T
Buy A New
Drive Shaft!**

**YOU CAN Re-Use
THE OLD ONE!**

**National DRIVE SHAFT BUSHING
& SEAL ASSEMBLIES**

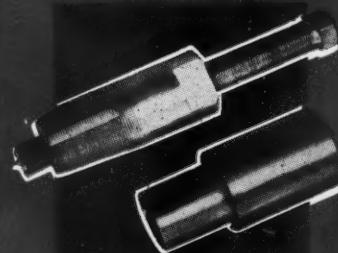
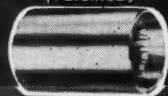
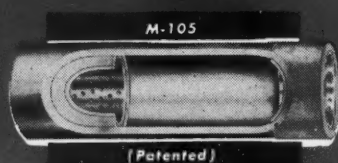
For Quick, Low-Cost Drive Line Repairs on Most Chevrolet Cars and Pickups and Most GMC Pickups!

FIRST INSTALLATION "STANDARD" BUSHING & SEAL saves money for you and your customer! Easily, quickly installed. Insures minimum drive shaft whip, vibration, noise from loose bearing. New, stronger seal insures against trans. running dry. Models: M-105, M-102, M-101 for Chev. cars and pickups, 1937-53, and most GMC pickups.

"SPECIAL MODEL" BUSHING & SEAL ASSEMBLY enables multiple repairs with the original drive shaft! The special-tempered steel sleeve fits over the worn surface to provide new, long-wearing bearing surface. Restores drive line to original, efficient condition for thousands of miles' additional service. For most Chev. cars and pickups and some GMC pickups—standard and Powerglide!

NATIONAL BUSHING PULLER & DRIVER KIT for quick, safe, profitable drive shaft bushing removals and replacements! After drive shaft is dis-assembled, 5 to 10 minutes' work removes bushing. Prevents injury to drive shaft. Fine steels, cadmium plated and fully guaranteed. For most Chev. passenger cars, 1930-53.

National Drive Shaft Bushing & Seal Assemblies are sold nationally by leading automotive wholesalers. They're tested and proven by thousands of motorists . . . for millions of miles of extra service! Build your repair profits with the National Line . . . contact us, today!



cranked her up and Ellington grabbed the handle. He threw in the clutch and headed for the tall grass. "See! Nothing wrong with this motor at . . ."

The reel bit into the grass and the engine died without a protest. The father hid his vexation. "Points is bad," he grunted. "That's all. Needs a little filing. Hand me the file, son."

"Better let me do it, Dad, while you're changing clothes. I'll take a look at the condenser while I'm in there."

"Now don't go fooling around the gas line, son. It's dangerous. Anyway, there's Tommy. And much as I hate to ask him for his professional advice, I fear your mother's wrath even more."

"Aw, I wanna' fix it myself—to-

(Continued on page 70)



NATIONAL MACHINE WORKS, INC.

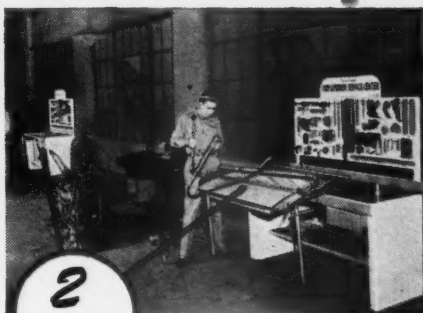
P. O. BOX 4305 MANUFACTURER AUTOMOTIVE PRODUCTS OKLAHOMA CITY 9, OKLA.

read how **Bench-Rack** owners
increase body shop labor output
25% to 40%



3 BENCH-RACKS So they bought 2 more!

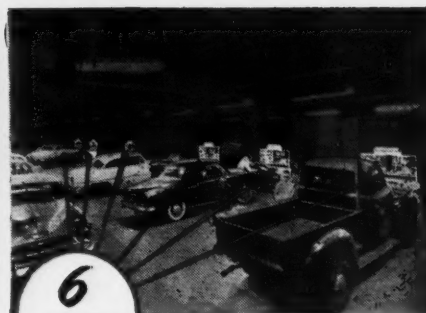
HOLLAND AUTO REBUILD, Kent, Wash., states, "Our first *Bench-Rack* helped one of our body men save 30% of his time, yet turn out better work, so we ordered two more."



2 BENCH-RACKS

Tried one, bought 6!

BILL KUHN, NORTH SIDE CHEVROLET, Inc., Indianapolis, Ind., writes, "A five week study showed us *Bench-Rack* upped labor sales 25%. As a result, we installed six."

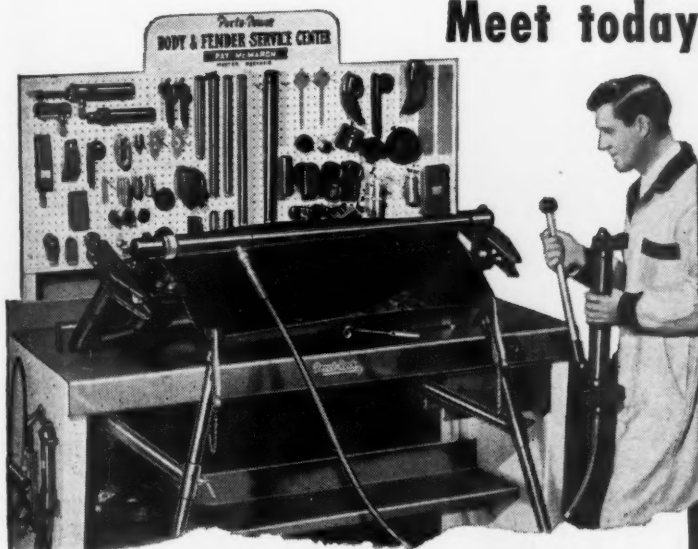


6 BENCH-RACKS

No more space . . . output up 30%!

LEE MOTORS (Ford dealer), Toledo, Ohio, states, "*Bench-Rack* has stepped up our shop productivity a conservative 30%, greatly contributed to our service absorption."

Meet today's competitive challenge!



This is *Bench-Rack*! It includes all the *Porto-Power* hydraulic items and auxiliary equipment listed below — and it's ALL necessary for full profits today!

- 10-piece Bantam Pull Clamp Kit
- 20-piece 10-ton Pull Clamp Kit
- 16 pieces of Bantam Lock-on Tubing
- 15 pieces of 10-ton Lock-on Tubing
- 20 additional Bantam and 10-ton attachments
- 4 hydraulic rams, 2 pumps, 1 spreader
- Heavy-duty steel workbench
- Body section holding fixtures
- Improved door bar
- Silhouetted tool panels
- Individual service sign

NEW
Porto-Power
SYSTEM
BOOSTS INCOME WITHOUT
INCREASING OVERHEAD

Here's the revolutionary answer to keeping profits up despite tighter competition, mounting overhead and declining income from other departments. A well organized body shop is a gold mine — and *this* is how to organize it. Simply furnish each body man with his own *Bench-Rack* work center. It has all the *Porto-Power* equipment he needs to handle rough-out and alignment work — on or off the car. As a result, you'll get 25% to 40% more output per body man . . . conserve valuable skilled manpower . . . save space . . . and be able to organize and merchandise your body shop to its fullest, most profitable advantage!

So ask your Blackhawk jobber *right now* to show you how this equipment gives you more "dollars from damage." Or write Blackhawk Mfg. Co., Dept. P-684, Milwaukee 1, Wis.

BLACKHAWK®

Porto-Power and Bench-Rack are the exclusive (trademark registered) products of Blackhawk Mfg. Co.

morrow morning. It's too hot to finish this yard, ain't it, Pop?"

"Go get Tommy."

Tommy lived next door. It was a rare occasion indeed when he got a chance to look at anything mechanical on the Link place. He had learned long ago to let the two Links alone—until they gave up on their own. To suggest before the

point of desperation was always to invite a rebuff. Anyway, sooner or later the car, the mower, the in-board motor—even the bike would find its way down to the shop for a "check up." That is *after* the two mechanics had finished.

"Well . . ." Tommy scratched his head and gave the starter a yank.

"Kid's been over everything,"

Ellington said. "I guess it has seen its day. Wore out. Never had it overhauled and been running it ten years."

The mower cut into the lawn, chugged along half heartedly for a few feet, then gave up. Tommy threw the clutch out and let it idle. "This is pretty heavy work for a small engine. But let's check the point gap. May be slow timing."

They pulled the flywheel while the kid stood by fretfully. "It's late, Tommy," he said.

"Well, how do you know? You had this thing apart?"

"No. No, I mean it'll be too late to get a boat if we wait much longer."

Tommy whispered, "Your father has already started casting. He's casting some mean looks toward the hand mower. I'd suggest you try your skill with that."

Points looked ok, so Tommy removed the plug and made a check of compression against his thumb. "It doesn't have much compression. It's probably just low power for that heavy lawn."

"Low power!" Ellington exploded, "Why that blamed mower wouldn't pull a loose wrench out of a tight squeeze! Kid's fault. He went to a Scout meeting last Sat-

The United States has more than three-quarters of the world's passenger cars, and almost half of its trucks and buses.

urday and didn't never get around to cutting the grass. And now Mother will sure be blue . . ."

Tommy tried it out again with no more success. "This is a job for the shop on Monday. Want me to take it in?"

Ellington looked at the panting mower. Then he looked from the house to the autographed front lawn and back at the boy.

"I can't push a hand mower through there," the kid moaned.

"You had your lunch, son?"

"No."

"You willing to go without it? Get a malted milk and a sandwich down at Jim's?"

"But I can't push that hand mower!"

"Then I reckon we will just have
(Continued on page 74)

Now!
**OIL FILLED
COILS**
*for all 3
systems*

**ALL THESE
ECHLIN EXTRAS
AT NO EXTRA COST
TO YOU!**

- Oil Impregnated Winding for Perfect Insulation
- Vacuum Filled Case Leaves No Air Pockets
- Completely Waterproof to Assure Long Life
- Low Current Draw—Extends Contact Life
- Correct Diameter and Terminal Position for Every Application

The Complete Line of Oil Filled Coils for all Modern Vehicles...
The Finest Coil Ever Designed
Regardless of Price . . . **YOURS**
at No Premium Price.

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CONTACTS
COILS - CONDENSERS
& OTHER AUTOMOTIVE
ELECTRICAL PARTS

ECHLIN MANUFACTURING CO., DEPT. MA, 220 EAST ST., NEW HAVEN 5, CONN.



Do you know these famous record makers?

Both of these people are famous record makers for Columbia. You'll probably recognize Mindy Carson, but do you know that other famous record maker—tune-spotter Mitch Miller?

"When a hot song comes along," Miller says, "we often cut the master tape out in Hollywood, holding our breath because other companies will try to 'cover' the tune first.

"We rush the master tape to our Eastern factories—always relying on Air Express to get it through *fast*!

"The new disc is on the air and for sale in stores in record-breaking time, thanks to Air Express.

"We turn to Air Express at least three or four times a week to beat out competition.

"And yet, most of our shipments cost less with Air Express than with any other air service."

It pays to express yourself clearly. Say Air Express! Division of Railway Express Agency.



Air Express

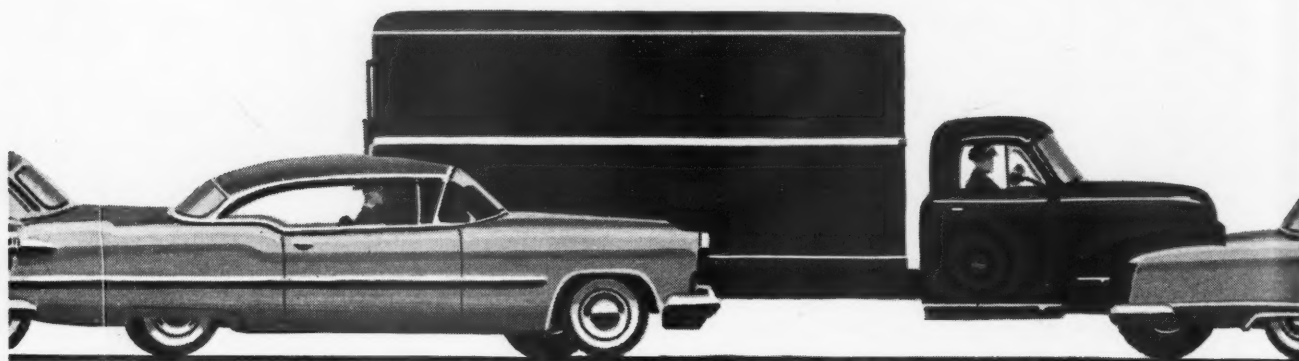


GETS THERE FIRST via U.S. Scheduled Airlines

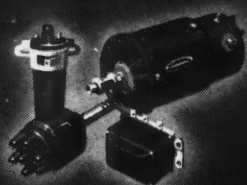
CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY

Get these original equipment parts with

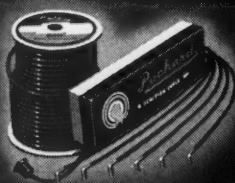
Independent



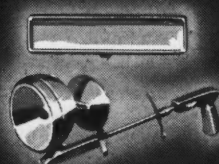
Almost half of America's cars use these famous products by **GENERAL MOTORS**



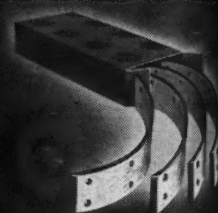
Delco-Remy
Starting, Lighting, Ignition



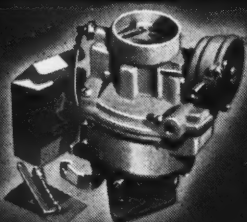
Packard
Cable Products



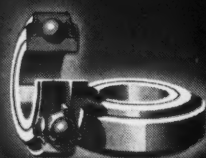
Guide
Lamps



INLITE
Brake Linings



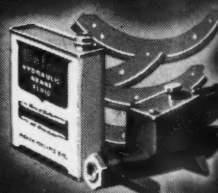
ROCHESTER
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NEW DEPARTURE
Ball Bearings



DELCO
Shock Absorbers



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Brake Parts and Pads

proved performance from your UMS

Automotive Wholesaler

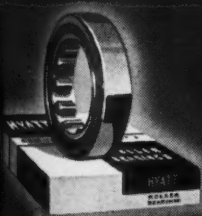


A profitable service business is your aim and it's easily accomplished with these three important elements—good service, fine products, and a ready-made market. You supply the good service, and your UMS independent automotive wholesaler supplies the fine products with a well-established ready-made market.

The fine quality of General Motors products is an

accepted fact throughout the nation. As for the ready-made market—almost every other car that passes your door is equipped with the famous General Motors Products that you see here.

You'll find it's good business to see your UMS independent wholesaler now. He'll be glad to help you get started with this profitable and popular line of replacement parts.



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HARRISON RADIATORS • **MORAINE** GASOLINE FILTERS

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GENERAL MOTORS PRODUCTS



SERVICE

UNITED MOTORS LINES

to wait until next week to cut that grass. And I wouldn't want to bother your mother by telling her about it. So we'll just kinda' slip out soft like."

"I'll have this motor back by Monday evening. And you'll have time to finish the lawn before dark then," Tommy consoled.

"Sure. Can't push a mower

through there hot as it is," Ellington said, heading for the garage and two fishing poles. "And a little tall grass can't interfere with a book review anyway, can it, son?"

When Tommy came in Monday morning with the engine, Pop O'Neill got inquisitive right away. "Now what's wrong with this animal?" he wanted to know.

"No power. The rings are worn, or else the valves are leaking," Tommy explained. "I tried it and I know it stalls under heavy load. Just conks out like you would smother a fire with a wet blanket."

"Well, if it's got all them things wrong with it, no wonder," Pop said. "But better find out first."

"That's what I'm doing. But look here," Tommy said, after putting a gage on the engine, "Compression is not so bad at that."

"Fine time to find that out," Start it up. Let's hear it."

Tommy bolted the engine down and started it up. "Nothing wrong with that engine except some 12-year old has had too many parts apart," Tommy grumbled.

"And one too many mechanics has got his hands in it now," Pop quipped dryly. "Why the deuce didn't you straighten those boys out out there at home 'stead of wasting time decking this out here on the work bench?"

"Well, I had my good clothes on, and Ellington was in so darned much of a hurry to condemn the engine. He said he'd never had work done on it, and to give it a good complete job while it was here."

"Well, I guess it can stand some work, Tommy, but that ain't what

DON'T WAIT!

Car-Skin Always Brings the Customers Back for More!

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CAR-SKIN RECONDITIONER
Used before Tempered Wax, this Reconditioner restores any finish to its original brilliant color. No acids — nothing harmful.



8 OZ. SIZE
ALSO
GALLONS
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CAR-SKIN PRODUCTS
CORPORATION
Flemington, N. J.



your trouble is." Pop was listening intently to the engine at wide open throttle.

"Put a rev counter on her and you'll find out."

"You mean low rpm. You think the governor's stuck or something?"

(Continued on page 78)

Your Chevrolet Dealer is
ready, willing and able
to serve you
better than ever!
See him today!



Greater Customer Satisfaction

Your service work is bound to satisfy when your skilled mechanics use Genuine Chevrolet Parts. They're made to function better . . . last longer.

Independent Servicemen:

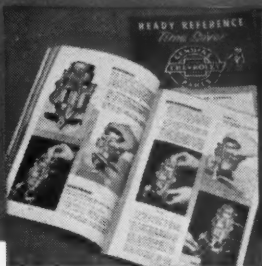
*Here's 1
of the
4 Big
Benefits
you get*

when you deal with
YOUR CHEVROLET DEALER
... **YOUR PARTNER**
IN SERVICE

*Here are the
other 3 →*



More than 1 out of 4 vehicles on the road is a Chevrolet! It's the largest owner service market in the industry! By dealing with your Chevrolet dealer, you can take full advantage of the wide reputation for customer satisfaction that has been built by Genuine Chevrolet Parts.



Technical Helps in Solving Service Problems

Helps like the "Time Saver" shown here enable you to solve tough service problems quickly and accurately. You do jobs the *right way—right away!*



A complete line of Genuine Chevrolet Parts

One quick, convenient source supplies all the parts you need. And you get the right parts to do the job right—Genuine Chevrolet Parts.



Increased Service Efficiency

You get parts you want in a hurry. What's more, Genuine Chevrolet Parts fit right . . . save time on the job. Installation is quicker, simpler, easier.

YOUR CHEVROLET DEALER IS READY, WILLING AND ABLE TO SERVE YOU



Thanks to you...

THE CAR YOUR CUSTOMER DRIVES

It isn't easy to keep an old car running like new, but thanks to America's mechanics, owners are getting thousands of miles and years of extra service from their cars.

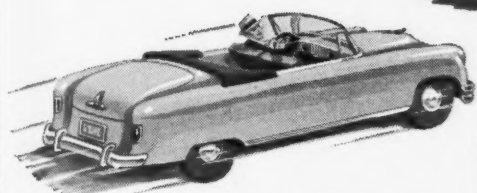
It takes your skill and experience . . . plus *better* parts . . . to do a piston ring job right—and you just *can't* do better than Chrome-Control Leak-Proof piston rings because

**CHROME-CONTROL LEAK-PROOF PISTON RINGS
WILL OUT-PERFORM ANY OTHER SET IN THE "HARD-
TO-HOLD" JOBS REGARDLESS OF KIND, DESIGN
OR PRICE.**

**McQuay-Norris Manufacturing Co.
St. Louis 10, Mo.**



**RUNS LIKE THE CAR
HE BOUGHT!**



CHROME CONTROL LEAK-PROOF
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PISTON RINGS

**THE
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COMPLETE
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**PISTON
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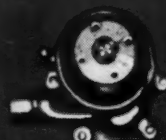
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**SOCKET AND
ROD SERVICE**

**KING BOLT AND
BUSHING SERVICE**



**YOU JUST
CAN'T DO BETTER**

"I'm sure that thing is not turning up over 2800 rpm when it should turn up 3800."

"I don't know just what is stuck or what is holding up that action, but you're getting low rpm's out of this animal. You've got to run these small engines right up to their rated output to get peak power at the cutter bar."

Tommy removed the flywheel. Sure enough the governor vane was bent out of position. "That's a good one on the kid, too," Tommy laughed. "He talks big, but when it comes to knowing something about fixing an engine, he's a fly-weight."

"Hmmm, I don't know about that," Pop mused, examining the

blade carefully.

"Well, Pop. You know what a wrench happy boy young Link is after a year of manual training in school. He's got all of his father's confidence — with none of his father's caution. That's kinda dangerous, ain't it?"

"Hmmm. 'Peers to me he was not only a mechanical genius—for his age—but a master at putting it over on the old man."

"Why do you say that?"

"Well, this governor vane has been bent and it's not opening the throttle to its full open position."

"Sure. I see that now. I should have noticed that when I had the flywheel off."

"But it's been bent with a pair of pliers."

"Think so?"

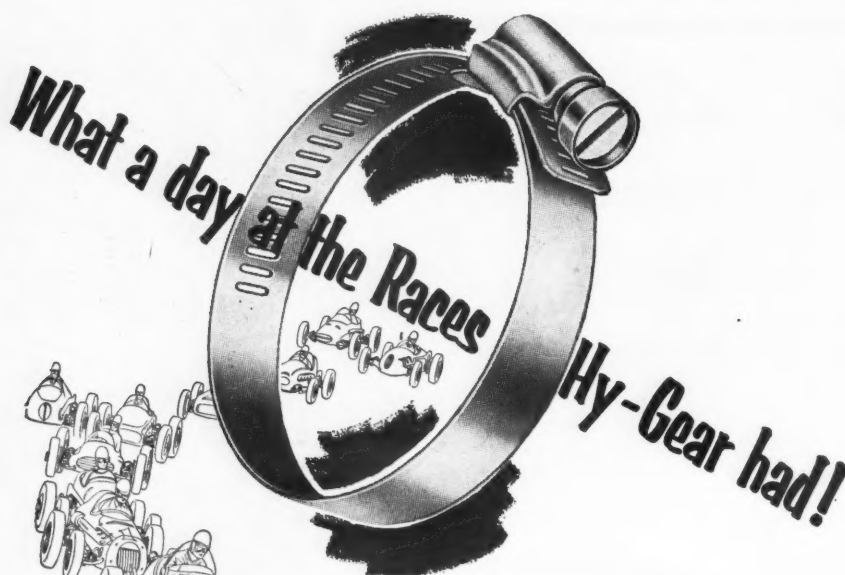
"And deliberately. This was a put-up job, Tommy, and you got stuck with it."

"Yea? Why?"

"You got the facts. You figure it out. Boy with wrench. Plier happy . . . fish happy. Dawdles all morning and then gets desperate when Papa gets home. It's a perfectly good afternoon to go fishing. But hot as hell to cut grass."

"I think I get it, Pop."

"What would you have done 15 years ago—if you'd had a pair of pliers handy—and knew how to use them?"



Bill Vukovich, winner of the Indianapolis Racing Classic picked Hy-Gear for the hose clamp that could take it.



NINE OUT OF THE FIRST TEN DRIVERS to finish the punishing 500-mile grind at Indianapolis were equipped with Hy-Gear—Ideal's new hose clamp.

This annual 4-hour trial by torture is equivalent to

five years of normal driving. Hy-Gear's performance under Speedway conditions is conclusive proof that, under any conditions, Hy-Gear can't be beat!



HIGH QUALITY—Stainless steel band and housing—no rivets, no welds.

HIGH SPEED—Goes on with hose in position... Safety collar keeps screw driver from slipping.

HIGH POWER—Gear-drive principle assures positive, leak-proof seal.

performance guaranteed since 1913



GOING UP to the first floor of the Eiffel Tower, this French Simca will join other models at the Paris Automobile Show held there recently.



call your Westinghouse Air Compressor distributor

● When something goes wrong with your air compressor, it has to be fixed *fast* . . . to put your air pump, grease guns and car lift back in operation.

Westinghouse Air Compressor distributors know how much you and your customers depend on your air supply. So they are ready with parts, equipment and experienced workmen to put your air compressor back in the running—in a hurry.

Just call your Westinghouse distributor if your air compressor happens to conk out. He's listed in the classified section of your telephone directory under Air Compressors.

**Your distributor carries a full line of
Westinghouse Air Compressors for immediate delivery**

Westinghouse Air Compressors come in a wide range of models and sizes to meet all your air requirements, large or small. As an example, the Westinghouse "Y" and "G" compressors are available in sizes from 1½ hp up to 15 hp, with capacities from 2.7 c.f.m. to 68 c.f.m.

Westinghouse Air Brake COMPANY

INDUSTRIAL PRODUCTS DIVISION

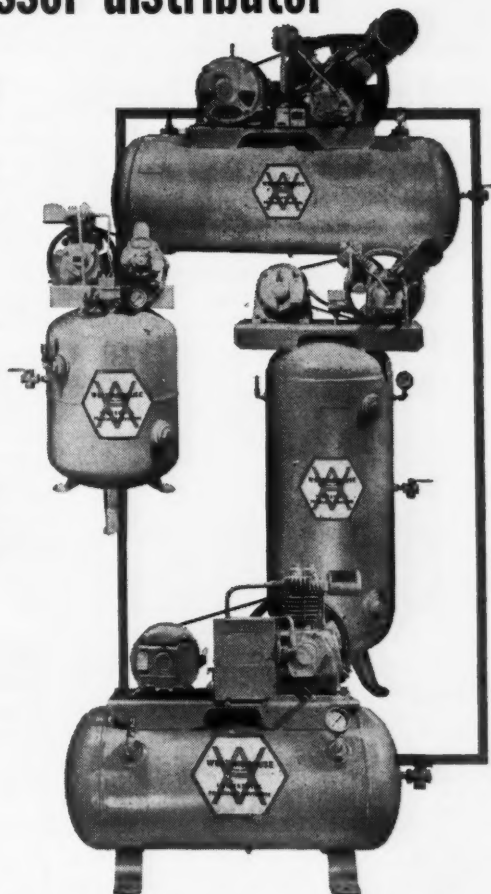


WILMERDING, PENNSYLVANIA

Manufacturers of air compressors, pneumatic cylinders, actuators, air control devices of all kinds, engineered pneumatic control systems, and front end loaders.

Factory Branch: EMERYVILLE, CALIF. Distributors throughout the United States...Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co. Ltd., Hamilton, Ont.

Chilton's MOTOR AGE, AUGUST, 1954



Tubeless Tires Continued from Page 43

rust and rubber particles. If the flange is rusted, clean it with a wire brush or file it to a smooth finish. Make sure that no grooves or high spots are at the butt welds. Examine the well of the wheel where the rivets are located. In some cases it may be necessary to punch and put a sealer on these rivets to prevent air leaks.

Before installing the metal valve, clean the inside of the rim around the valve hole with steel wool and the outside of the rim around the valve hole with a damp cloth. The furnished valve assembly consists of a metal valve, two rubber washers, a metal washer and a hex nut. The oval washer is supplied for rims having oval holes. The rub-

ber washer used at the base of the valve has a shoulder which should be centered in the valve hole. Place the plain rubber washer on the outside of the rim. Then place the metal washer over the plain rubber washer. The convex side of the metal washer should be facing up towards the top of the metal valve. Apply the hex nut and tighten the assembly with a deep socket wrench. The correct degree of tightness is controlled by squeezing the rubber washer until it is exactly the same diameter as the metal washer.

Remove the valve cap and core. Removing the core permits a surge of air to enter the tire to force the heads into position. Leave the core in place when installing tires on Chrysler safety rims.

Wipe the rim edges with a water-moistened cloth to remove all foreign substance. Moisten beads with clear water to help snap in place when inflated.

When mounting the tires on the wheel, mount in the usual manner without using a hammer. Take small bites with a tire iron to avoid damaging the rim seal ridges. Irons should be free of burrs. If a tire mounting machine is used, make sure the parts contacting the tire beads are smooth and clean.

To install the outer bead, start the tire over the rim flange so that the valve stem will be near that section of the bead which goes over the rim flange last. Otherwise, the base of the valve may prevent the bead from dropping into the well when the last section is being pried over the rim flange.

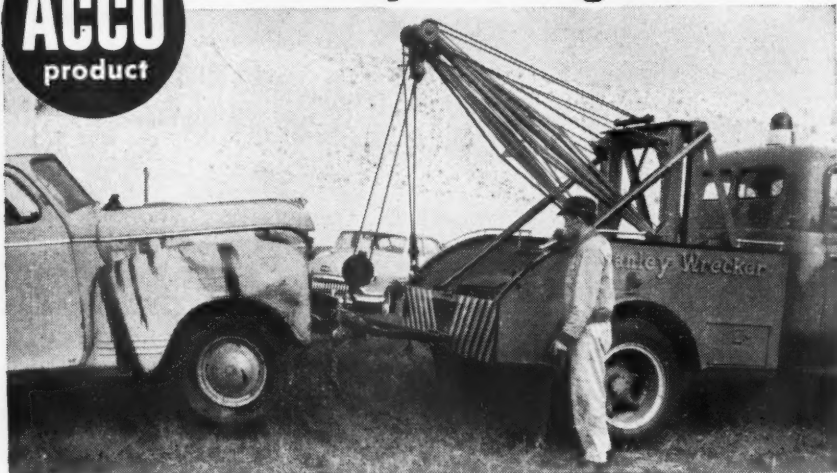
When inflating the tire, stand the tire and wheel in a vertical position and bounce it on the floor at various points around its circumference to snap the beads out against the rim flange. This will provide a partial seal to start inflation. A special clamp is available to spread the beads or a piece of sash cord can be tied around the tire to accomplish this.

If a tire is punctured there are several methods that can be used to repair it. First determine the extent of damage. For breaks and holes larger than 1/4-inch a vulcanize job is recommended. However, if vulcanizing service is not

(Continued on page 82)



Manley Towing Hitch



Tow Heavier Loads...Faster...Safer

• This MANLEY Heavy Duty TOWING HITCH (No. 2209) gives closer, safer hook-ups on heavy loads with strength to spare.

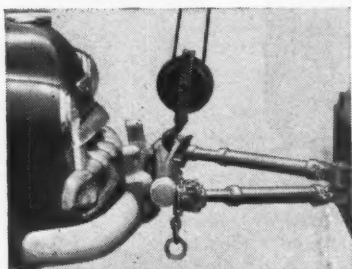
Special, quick-tightening chain lock mechanism and two big, deep-throated grab hooks cut hook-up time in half.

Telescoping action of rugged

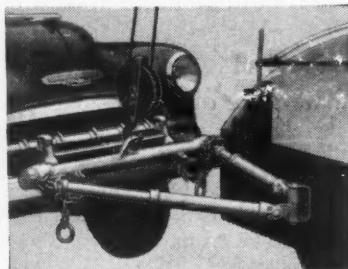
shock-absorbing tubular steel arms allows closer, better balanced loads—with automatic load centering for off-center hook-ups.

Permits full brake application at highway speeds. Telescoping arms absorb shocks, jars, bumps.

Turns in safety. Wrecker and towed vehicle can't touch.



Closer hook-up



Safer turning

• The best-equipped garage gets the profitable business. See your MANLEY Jobber today.



**Manley Division
AMERICAN CHAIN & CABLE**

York, Pa., Chicago, New York, Portland, Ore.,
San Francisco, Bridgeport, Conn.

In Canada:
Dominion Chain Company, Ltd., Niagara Falls, Ontario

MAIL TODAY

MANLEY DIVISION
American Chain & Cable, York, Pa. MA

Please send literature and price
of MANLEY Heavy Duty Towing Hitch
No. 2209.

Name _____

Address _____

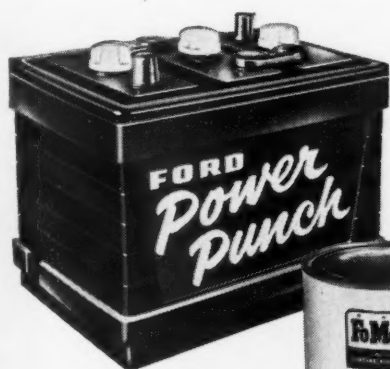
Town _____ Zone _____ State _____



The blue Ford Parts Oval is a "come in" sign for Fords.

Want to service more Fords for winter?

*New profit opportunities open up when you
show Ford owners you're set up to "winterize" their Ford
right—with this timely trio!*



This fall another winterizing campaign with full-page ads in LIFE, SATURDAY EVENING POST, COLLIER'S, LOOK and TRUE will remind millions of Ford owners to get their Fords ready for cold weather. And you can get a lot of this business—if you have a Ford Parts sign outside your shop to show Ford owners you are set up for their special needs.

Genuine Ford "Power Punch" Batteries fit the exact ignition requirements of every Ford. They carry a liberal warranty and are sure to satisfy your Ford customers.



Ford Anti-Freeze, both Permanent and Regular, contains a rust-inhibitor. Ford Permanent is specifically developed and tested to be best for Ford cooling systems. Ford Regular gives dependable protection at low cost; it is a popular member of the Ford-tested winterizing team.

Mail this coupon for full information on how to get a business-building Ford Parts Oval!



MAIL THIS COUPON NOW!

PARTS AND SERVICE SALES DEPARTMENT

Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send me complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME _____

INDIVIDUAL'S NAME _____

ADDRESS _____

CITY _____ STATE _____

Tubeless Tires Continued from Page 80

available, a cold patch will do. Before applying cold patch on self-sealing tires, cut away all loose sealant with a sharp knife. Remove no more liner material than necessary to clean out the puncture. Buff the area where the new sealant is to be applied. Apply the cold patch cement and allow it to dry until tacky.

Cut a patch to the size and shape of the buffed and cemented area. Wash the patch with solvent until the surface is tacky and allow the solvent to dry before applying to patch. Apply the patch and roll it down thoroughly to remove the trapped air. Any remaining trapped air bubbles can be removed by puncturing the new sealant

with an ice pick and pressing down with the fingers.

For injuries $3/32$ to $1/4$ -inch in size a rubber repair plug can be used. Cut away all the loose sealant on the self sealing tires with a sharp knife. If there are any cracks in the sealant leading to the puncture, all traces of the cracks must be buffed or skived out around the surrounding area of the hole. Use a hand rasp to remove all foreign matter from the injury. Wash the buffed area thoroughly with rubber solvent and allow it to dry until tacky. Use a metal inserting tool with prongs to grasp the small end of the rubber plug, or tie a string to the small end of the rubber plug to pull it through the hole in the tire and to seat it tight in the hole. If the hole is small and the base of the plug does not seat against the inside of the tire, cut off the excess material about $1/8$ -inch away from the inside wall of the tire. Cut off the excess plug rubber on the outside flush with the tire.

Minor injuries under $3/32$ -inch can be repaired on the car without removing the wheel; use a gun and tire dough. Inflate the tire to the recommended pressure and wipe dirt, dust and such from the tread area. Apply water with a hose and rotate the wheel to locate the leak. Remove the water from the injured area and mark it with chalk. Remove the puncturing object with pliers and clean out the hole with rasp. Reduce tire pressure to 5 or 10 pounds and apply the dough with the tire gun.

forget old-fashioned models!



THIS NEW MODEL GIVES YOU...

- **More Power** The most powerful soldering gun ever built. Four choices, from 100 to 275 watts, give you the right tool for the job, whether it's heavy work or light.
- **New Dual Heat** On some models, gives you extra capacity when you need it, and increases tip life to save you money.
- **Better Balance** New Weller Soldering Guns "float" in your hand, cutting fatigue, making your work easier, faster, and better.
- **Faster Heat** All new Weller Soldering Guns heat in 5 seconds—almost the instant you press the trigger! No waiting!
- **More New Uses** Two new Weller accessory tips let you use your Weller Soldering Gun for extra cutting and smoothing jobs.
- **Dual Spotlights** Pre-focused beams light your work, wherever it may be, eliminate the need for juggling a flashlight.

Better from Grip to Tip!

Weller
SOLDERING GUNS
 801 Packer Street • Easton, Pa.

ORDER FROM YOUR DISTRIBUTOR OR WRITE DIRECT FOR CATALOG



Tubeless Tire Repair Kit

Allow the tire to stand 20 minutes before re-inflating it to operating pressure. If the gun nozzle can be inserted into the puncture, the hole is too large to be repaired on the wheel and the tire should be removed and repaired from inside.

More DURABLE than
any other battery separator...



no wonder the best batteries use

U. S. Peerless MICROPOROUS Rubber Separators!

Battery acid and plate material have a highly corrosive effect on ordinary separators, especially at high temperatures. Charring, pinholing, pitting and disintegration are common results. But not with U. S. Peerless Microporous Rubber Separators. These durable battery protectors have greater resistance to oxidation than any other known separators. Laboratory and road tests proved this beyond the slightest doubt. It's a selling point no customer can resist. Your battery business will boom when you sell

Peerless.

U. S. Peerless Separators are so durable that the plates can never break through them. They will not get mushy or soft during battery life—will maintain original toughness. They cannot be harmed by battery acid, overcharging, or heat. They deliver 20% faster cranking speed because of high porosity. In cold weather, they deliver 10% more power when needed most. Cost per month is far less for Peerless-insulated batteries than for batteries with ordinary separators.



Write to address below for free copy of informative booklet on the high-performance, low-upkeep U. S. Peerless Rubber Battery Separators.

UNITED STATES RUBBER COMPANY

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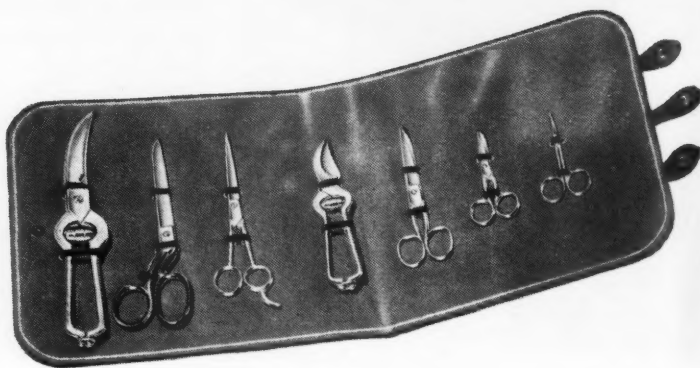


Hollingshead does it again!...



Alternate
Premium
imported
7-pc. scissor set
also only \$1⁰⁰

Included by popular demand. Has 7 useful cutlery items of high-grade German steel: poultry shears, dressmaker shears, barber shears, utility shears, flower cutters, embroidery shears and manicure scissors.



The most beautiful premium ever offered!

11-inch traditional Wm. A. Rogers Bowl

in heavy, gleaming silverplate

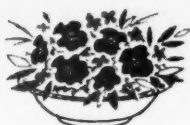
This handcrafted \$10⁹⁵ tablepiece

*< is yours
for only \$1⁰⁰*

(91¢ plus 9¢ federal excise tax)

This is an exclusive "Wm. A. Rogers" creation... designed especially for Hollingshead by the world-famous silversmiths, Oneida Ltd. You can't buy one like it for less than \$10.95. It is 11" in diameter and 2¾" deep, a versatile size that has many practical and pleas-

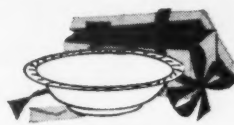
ing uses in the home. The heavy coating of pure silver is over copper so that its striking beauty and deep, rich luster will last for years. The embossed gadroon border harmonizes with every table setting and decor. This luxury premium deserves a place in your home.



... use for flowers



... for salads



... as a Christmas gift



... as a punch bowl

Here's all you do to get your beautiful, exclusive silver bowl: Buy any three-case assortment of 14 Hollingshead WHIZ automotive chemicals... and add \$1.00. (If you prefer, you may choose

the imported scissor set, or take a 1-dozen case of Motor Rythm for the dollar.) Check with your supplier's salesman on this remarkable Hollingshead deal—the finest ever offered.



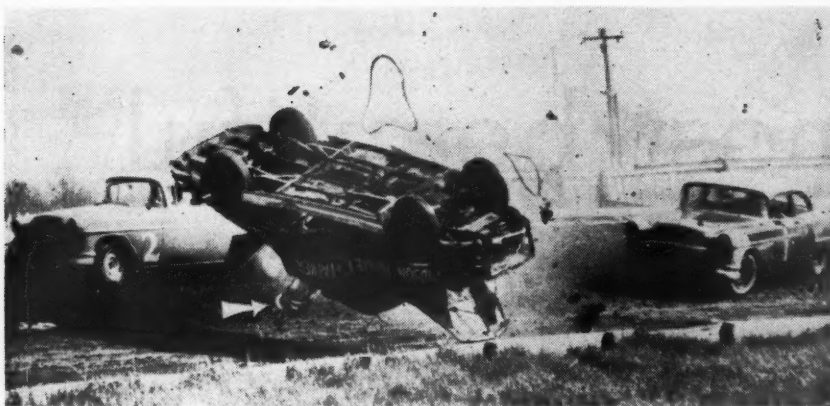
AUTOMOTIVE DIVISION

R. M.

Hollingshead
Leader in maintenance chemicals

CORPORATION

840 COOPER STREET, CAMDEN 2, NEW JERSEY



THE DRIVER (arrow) was seriously injured in this action during a 100 mile stock car race. His car flipped three times as the top was practically ripped off the body.

50th Outing for Chicago Orphans

Over 8000 orphans, crippled children and old folks from 41 Chicago area institutions will be guests at their annual outing in Lincoln Park this month. It will be the 50th annual picnic sponsored by the Orphans' Automobile Day Association, composed of men prominent in the business, professional and civic life of the city.

President of the outing this year is Henry Nierman, head of a successful Chicago printing business bearing his name. He learned the trade as an orphan at Angel Guardian Orphanage. He was a guest at outings 40 years ago. Entertainment is provided by top-flight TV, radio, night club and stage talent and clowns who volunteer.

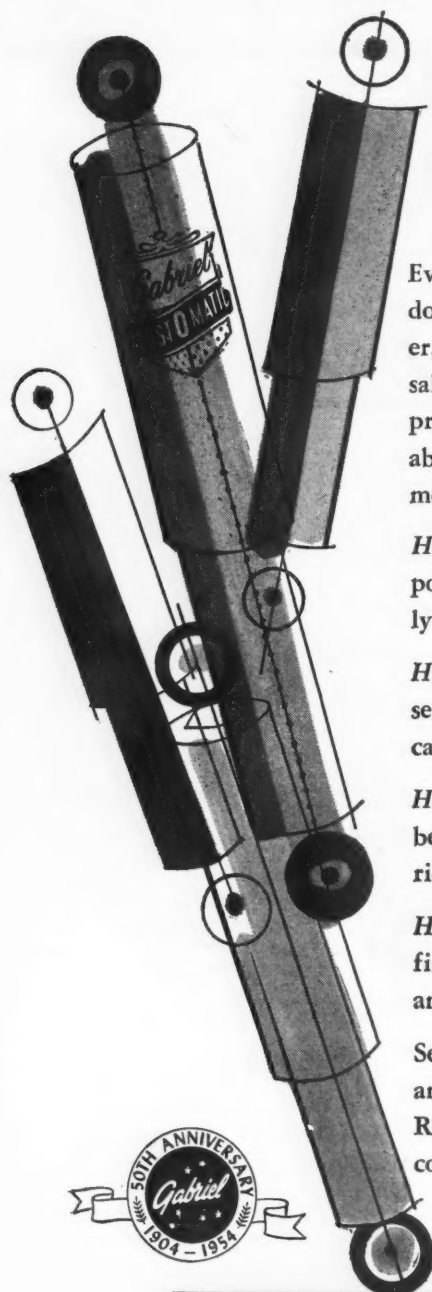
Prizes Upped for 5th Mexican Road Race

The Fifth Annual Mexican Pan American Road Race will be run November 19-23, 1954. The route will again be from Tuxtla Gutierrez north the length of the country to Juarez (border city of El Paso, Tex.). This year the amount of the prize money has again been increased. New rules for the race are to be announced soon.

Charles S. Davis

Charles S. Davis, 77, chairman of the board and formerly president of Borg-Warner Corp., died recently while on a European tour with Mrs. Davis.

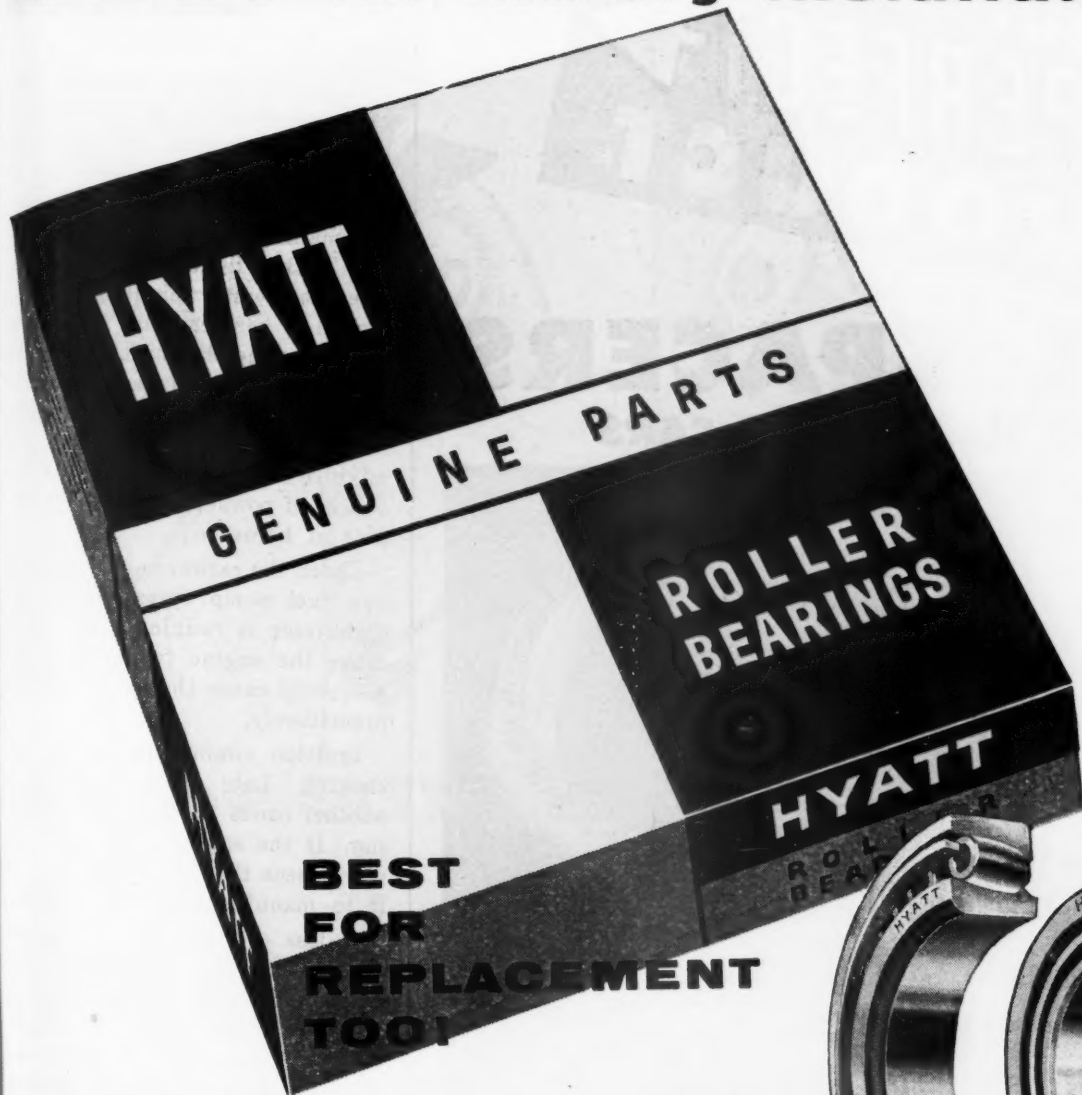
Surviving are the widow, Grace, of 1500 Lake Shore Drive, Chicago; two sons, Johnson S. Davis of Chicago and Charles S. Davis, Jr., of Detroit; and a daughter, Mrs. John Drum of Muncie.



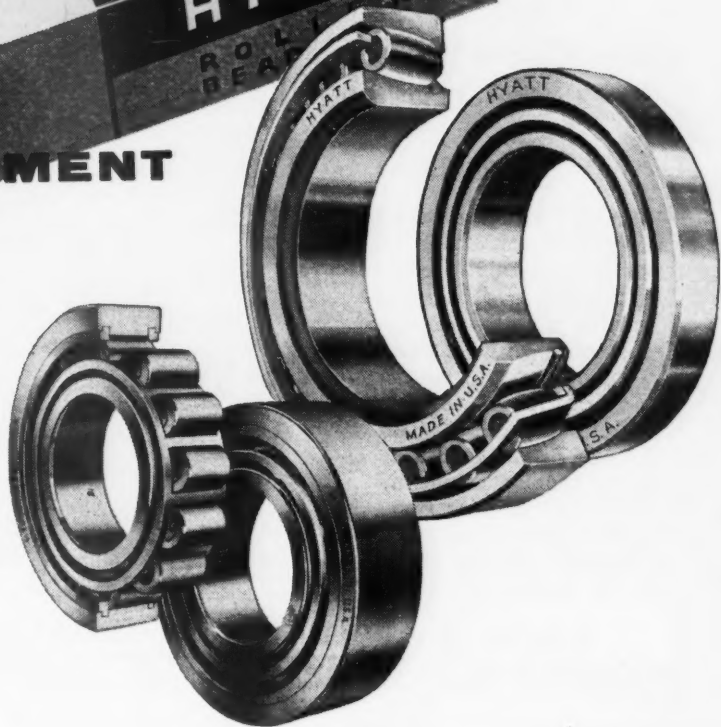
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When you replace a roller bearing—Straight, Barrel or Taper—you have a choice of several different makes of replacements. But only *one*—the genuine *Hyatt* Bearing—gives you a replacement of quality, as well as size and type. When you install Hyatts, you know you're using the same high-quality bearings that are preferred for factory installation by a majority of automobile, truck, bus and farm equipment manufacturers. So make the one sure choice. Insist on genuine *Hyatt* Roller Bearings for your replacements.



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Chilton's MOTOR AGE, AUGUST, 1954

Another PERFECT PRODUCT

COIL SPACERS FOR PASSENGER CARS

1. Permits Better Wheel Alignment
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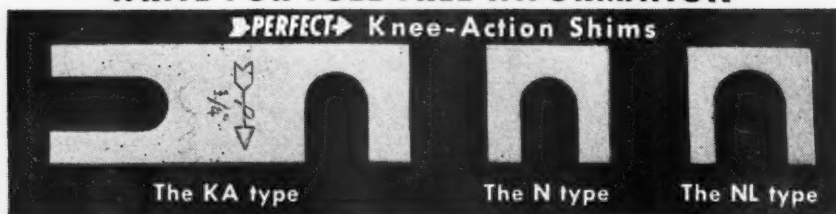


PERFECT Coil Spacers insure the proper coil action while restoring the original height and level of the car. They're made of the finest aluminum alloy especially for coil spacer rings—and conform readily without breaking. The PERFECT Ring has a minimum tensile strength of 32,000 pounds per square inch; and an elongation minimum of 6 per cent.

PERFECT Coil Spacers will raise the front end car height approximately 3 times their own thickness, and the equivalent of the spacer thickness on the rear end.



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Manufacturers of Passenger and Truck Wheel Weights — Coil Spacer Rings — Caster Shims.

Overheating

Continued from Page 44

sticking in closed position will cause overheating, loss of power, hard starting when the engine is hot and may also cause warped or cracked manifolds. To free a sticking manifold valve, tap it on the ends with a light hammer and rotate the counterweight. Penetrating oil or kerosene may be used to aid in freeing the shaft. When the shaft is free, apply a mixture of kerosene and powdered graphite liberally to the shaft bearing. The mixture should be composed of 2½ ounces of powdered graphite to one pint of kerosene.

Check the carburetor adjustment and fuel pump operation. If the carburetor is running lean, it will cause the engine to overheat and also could cause the valves to burn prematurely.

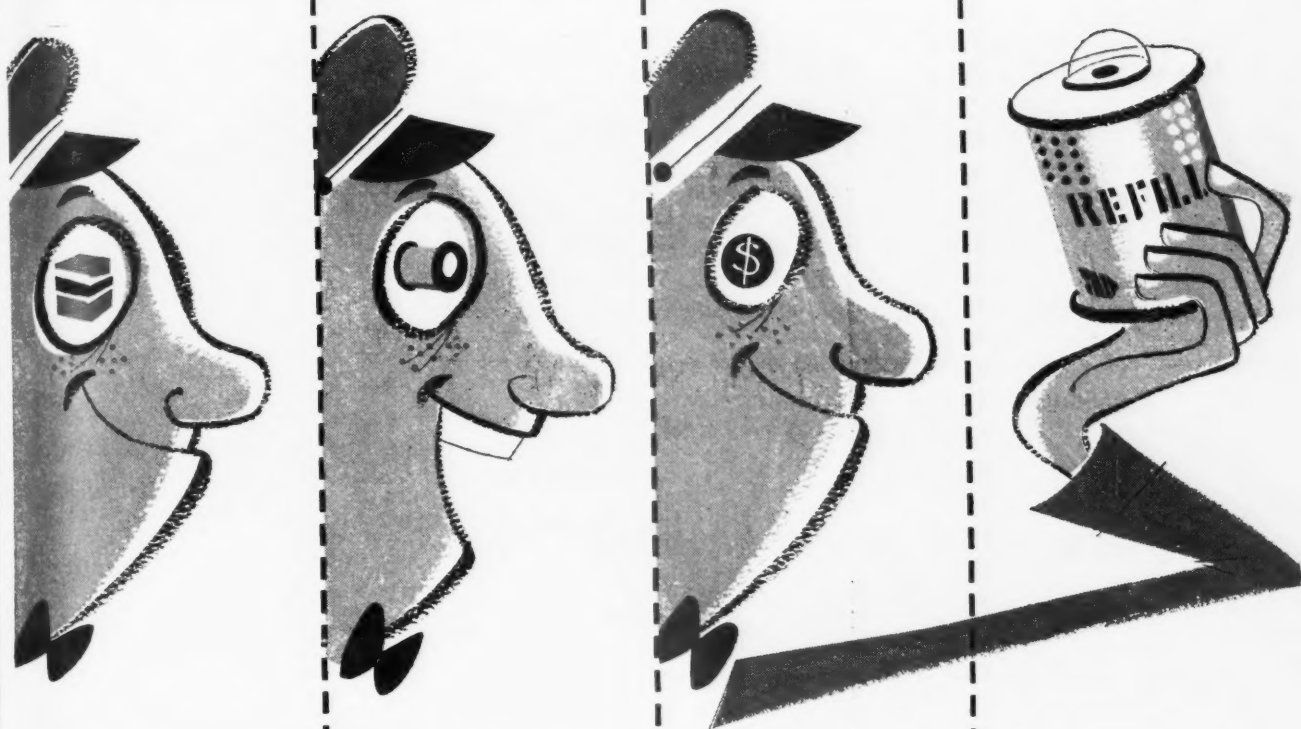
Ignition timing should also be checked. Late ignition timing is another cause for engine overheating. If the engine is sluggish, always check the timing first and set it to manufacturer's specification.

If loss of water is causing the overheating, the radiator pressure cap should be checked and, in severe cases, the head gasket should be checked for leaking. A leaky head gasket usually can be detected by removing the radiator cap and putting the car in high gear and putting a load on the engine. If air bubbles come to the top of the filler neck, it's a good possibility the gasket is leaking and should be removed and checked.

Always check the system for external water leaks. Leaks are easy to find, since you can either see the water leaking out or you can see traces of rust which show where the water has been leaking. It usually leaks out around the cylinder head gasket, at the core plugs on the block, at the hose connections or at the radiator.

Also check the water pump. A quick check on this is to move the fan blades back and forth and up and down. Any play or movement usually indicates a leak at the seal due to a worn bearing.

(Continued on page 90)



See how **EASY** it is!

Stock up...Speak up...and Sell...PurOlator

With just one make—
PurOlator—sell every
car that calls. Full stock
takes only a few feet of
shelf space . . . costs
little—pays off **BIG!**

Remind motorists that
filters must be changed
regularly . . . that *one*
filter—PurOlator*—
keeps engines running
better *longer*—saves
time, saves money.

No come-backs except
satisfied customers who
come back for filter-
changes! Motorists
know—and trust *one*
filter—PurOlator—sold,
advertised everywhere.

Best by every test!
One filter—PurOlator—
gives up to 10 times
the filtering area.
Original equipment on
most makes of cars,
makes replacement
double-easy.

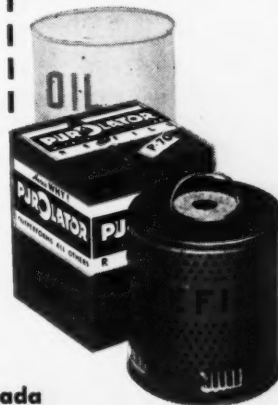
Big Bonus! Every PurOlator Micronic* sold means the
sale of an extra quart of oil to take the place
of the dirty oil thrown away with the dirty filter!

*Reg. U.S. Pat. Off.

PurOlator

World's finest
OIL FILTER

PUROLATOR PRODUCTS INC. Rahway, New Jersey and Toronto, Ontario, Canada



Overheating Continued from Page 88

A compression leak is caused by cylinder head that isn't tight or a head gasket that is blown. A compression leak from the combustion chamber into the water passage builds up air pressure in the cooling system which will force water up into the radiator top tank too fast and some of it will overflow.

Also there's a possibility of the

pump sucking air into the system because of a loose hose connection or a leaking seal. This type of a leak will put air in the system and push water out of the overflow tube. A quick test on this is to attach a rubber hose to the overflow pipe with the other end of the hose in a pail of water. When the engine is raced, bubbles usually come out of

the rubber tube, which indicates an internal leak. Next thing to check is where the leak is coming from; whether it is a compression or water pump leak. A quick check is to loosen the fan belt so it won't drive the pump and run the engine again. If bubbles do appear, the trouble is a compression leak because the pump isn't turning. If a clogged system is causing your overheating, and this is a common one, it can be caused by rust formations in the cylinder block, or scale forming from the minerals in the water. A clogged core can be detected by disconnecting the top and bottom hose and plugging the radiator inlet and outlet connections. Fill the radiator with water and leave the filler cap off. Then pull the plug out of the bottom fitting. If the water spouts out in a column five or six inches high, you will know that the core is unclogged. But if the column of water is only an inch or so high, you can be sure the core is clogged, in which case it should be reverse flushed or taken apart and cleaned out properly.

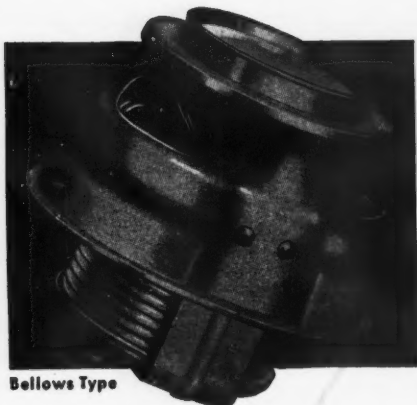
Another method for testing for a clogged radiator is by checking the radiator flow rate. The flow chart gives the approximate rate of water flow per minute.

Special equipment is available for making the above cooling system tests.

Flow Test Chart courtesy of Inland Mfg. Co., Omaha, Neb.

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Order Bridgeport car thermostats NOW!



Bellows Type



Power-Pill Type

NOW IS THE TIME to plan for your winter car-conditioning business—and be ready with an ample stock of Bridgeport car thermostats. An ideal opportunity to sell them is when you give cars winter servicing. And they build your profit on every job!

**FOR ANY TYPE COOLING SYSTEM,
SEALED OR OPEN**

Bridgeport thermostats meet the needs of any car—or any car manu-

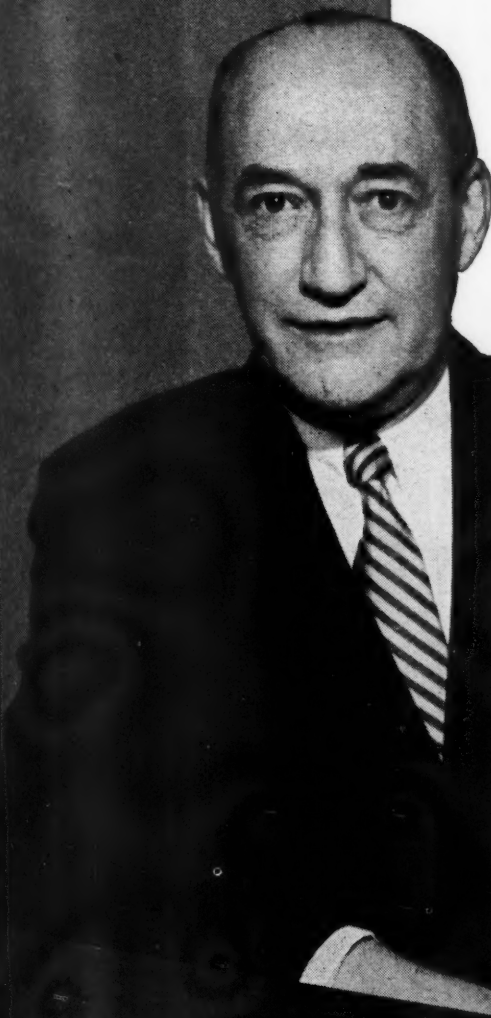
facturer's choice. They duplicate any original equipment thermostat.

They're rugged, dependable, easily and profitably installed. Attractive display carton available containing assortment of the most wanted models.

Order ample supplies now. See your jobber or write Dept. PMA, Robertshaw-Fulton Controls Co., Bridgeport Thermostat Division, Bridgeport 1, Connecticut.

BRIDGEPORT AUTOMOBILE THERMOSTATS





"A most satisfactory financing arrangement"

Reports **MR. G. B. LA SUER**, President of
La Suer Motors, Inc., CHRYSLER-PLYMOUTH
dealer in Birmingham, Alabama.

OUR use of the COMMERCIAL CREDIT PLAN dates back 7 years to the day we started in business. Since then, we have used the Plan continuously and exclusively. That we like COMMERCIAL CREDIT service and the many good features of their com-

plete financing plans goes without saying. If I were to sum up our experience, I would say our relationship with COMMERCIAL CREDIT's Birmingham office is one of friendly, interested cooperation based on mutual trust."

COMMERCIAL CREDIT DEALERS ARE *Successful* DEALERS

Let us show you how COMMERCIAL CREDIT's broad experience, large resources and complete financing facilities can contribute to your success. Write, wire or phone your nearest COMMERCIAL CREDIT office. You'll get prompt action.



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CREDIT
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Picture of a man about

BRAND NEW

from Hollingshead...

the rollingest, ruggedest, classiest

SERVICE CENTER

ever built...

and it costs you nothing in the long run!

The best deal on wheels comes from Hollingshead! Here is the sturdiest, best-looking, easiest-rolling service center available today. You will use this new Service Center both inside and out for display and advertising... in your driveway, on your station island or against the station wall. It is an ideal point-of-purchase reminder and with *your sign* on top, it is advertising at its best—a constant re-

minder to your customers of your good service.

COSTS YOU NOTHING IN THE LONG RUN! Special Hollingshead merchandise program on selected, fast-selling Whiz Automotive Chemicals enables you to own your indispensable Service Center with no out-of-pocket cost in a very short time. Check your supplier's salesman today. There's a Hollingshead Service Center ready to be shipped to you.

CHECK THESE EXCLUSIVE FEATURES

- **Giant Rubber Tire 8" Wheels** make stand easy to roll. Will cross 2" curb without stalling.
- **Free Personalized Identification Sign** fits top of stand with *your name* hand lettered on both sides.
- **Open on Both Sides** with sign and price strip on each side. Use against side of building, in driveway or on island, or inside as showcase.
- **Practical, Convenient Size**—57" high, 32" long and 22" wide. Gives you extra space not found in other stands for related items.
- **Rugged Steel Construction**—Made of $\frac{7}{8}$ " chrome plated steel tubing (not wire) for long selling service. Assembles in minutes.
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t to roll in extra sales!



Automotive Division



R. M.

Hollingshead

CORPORATION

Leader in Maintenance Chemicals

840 Cooper St., Camden 2, New Jersey

Highlights Continued from Page 41

duced not for the sake of making hot-rods or boosting road speed but to gain more power to pass on the highway. Greater acceleration often may spell the difference between safety and disaster.

The new engine era promises better fuel economy on all makes. Modern engines are more rigid in design, have less internal friction

—hence less power loss, have better balance and will run smoother, and generally speaking are much more efficient from the standpoint of fuel utilization.

Incidentally, the new engines should mean more use and replacement of hydraulic valve lifters, valve rotators, and oil filters. Valve lifters have come a long way in

recent years, may offer some novelties soon. For instance, several prominent parts makers are testing self-contained types which have no connection with the lube system of the engine. If any of these prove successful, it would mean a simplification of oil gallery design and possibly less maintenance.

LOS ANGELES has a problem. Although regional, it affects a major population area, poses some serious implications that have impelled the automotive industry, through the Automobile Manufacturers Association, to initiate a program of scientific inquiry. Smog is the problem, for want of a better descriptive term.

Now that the industry has entered the picture it is imperative for the automotive business community—motor car and truck dealers, repair shops, motor clubs, and others to exert their efforts in preventing hysteria and political pressures. Some people are proposing

it takes all 3

for Maximum Ignition Sales
with
Maximum PROFITS!

PRODUCT



Guaranteed's complete line of ignition parts are specially engineered for REPLACEMENT use, to REPLACEMENT specifications. Covers all ignition systems. Built for longer life, trouble-free performance.

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Guaranteed's merchandising program offers you a wealth of profit stimulators. Ignition inventory control, displays, merchandising sales aids, a national consistent advertising program at every level.

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Only Guaranteed
gives you this unbeatable
Triple Combination!

GUARANTEED PARTS CO. INC.

IGNITION PARTS - WIRE AND CABLE

SENECA FALLS, NEW YORK



the use of expensive attachments to motor cars, claiming these will eliminate exhaust problems. Experts doubt their effectiveness. One medical man recently proposed the theory that lung cancer is caused by exhaust gases in the air. The plain fact is that no one knows at this writing exactly what is responsible for the present conditions, nor what to do about it.

Los Angeles is subject to peculiar climatic conditions that doubtless have been present since the Pacific Ocean emerged. Like earthquakes, like the Dust Bowl, and like hurri-

(Continued on page 96)

WEATHERHEAD BRAKE HOSE, *Original Equipment* YOUR BEST REPLACEMENT BUY



Safeguard your reputation for reliability with Weatherhead brake hose and fittings. Its continuous use as original equipment is proof of its superiority in replacement. *Every foot* of hose is pressure tested; and this safety check is followed by the testing of *every* finished assembly in Weatherhead's rigid inspection. Your Weatherhead jobber carries a complete stock. If there's no supply in your area, write: The Weatherhead Company, Automotive Distributor Division, Dept. D, 300 East 131st Street, Cleveland 8, Ohio.



Get the BA-411 assortment of fastest moving hydraulic brake fittings.



WEATHERHEAD
THE ORIGINAL EQUIPMENT LINE



Remember:

"The Weatherhead line
is **EASY** to stock, **EASY** to sell,
EASY to install"

CAPT. **EASY**

canes and tornadoes, it is a natural phenomenon beyond the control of man. In this case, however, it is a situation that can be aggravated by man. Before the enormous population growth and industrial expansion incident to the last war, no one paid much attention to it.

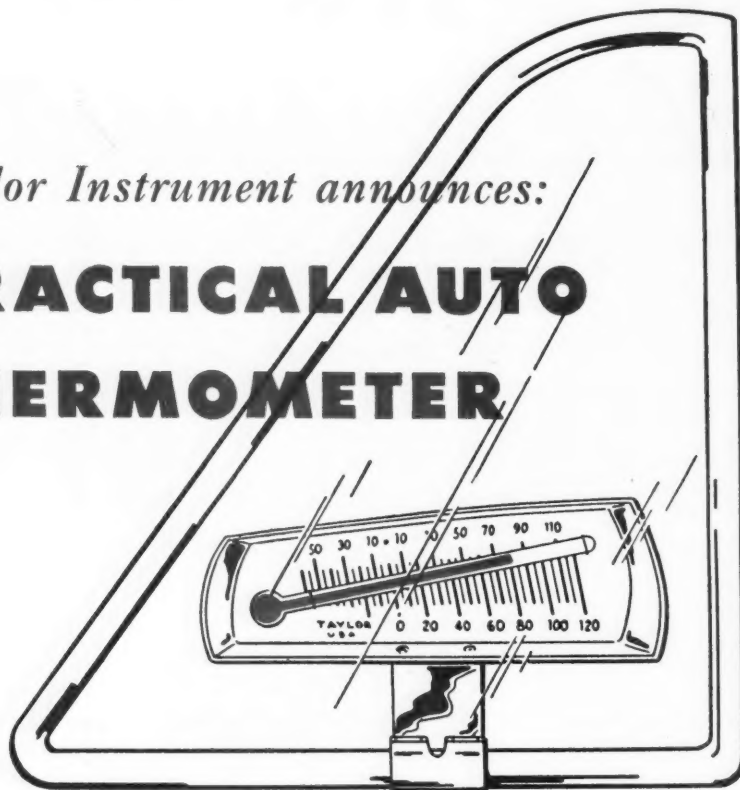
Today, however, the concentration of people, the concentration of

industrial plants, the growth of petroleum refineries, some two million motor cars and trucks and buses, smudge pots, some 800,000 incinerators, all have contributed to some extent to a rather alarming situation. Today Los Angeles has a serious air pollution problem. It is expressed in the form of reduced visibility under certain con-

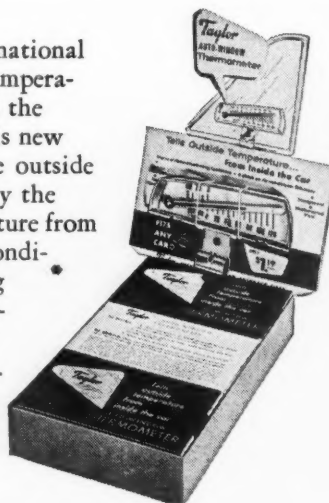
ditions, odors, rubber cracking, eye smarting, and crop damage. It is the last two that cause greatest concern.

To be sure, the government of the area has been making studies of the situation for a long time. Much of this has come to a dead end, although such sources of contamination as backyard incinera-

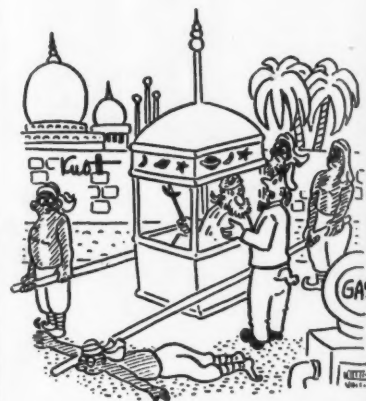
Taylor Instrument announces: **PRACTICAL AUTO THERMOMETER**



THE Taylor Instrument Companies, international leader in the manufacture of precision temperature and weather instruments, has developed the first *practical* auto window thermometer. This new auto thermometer (5" x 1 3/4") locks on the outside right front vent-window for easier reading by the driver and passengers. It tells *outside* temperature from *inside* the car. Warns of hazardous driving conditions. Provides a check on air-conditioning efficiency. Popularly priced at \$1.19, the thermometer is merchandised in a self-service promotion display package of six. (\$7.20 list). Order NOW for winter preparation sales. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.



Taylor Instruments **MEAN ACCURACY FIRST**



"Your left front is flat, sir."

tors are still under investigation. More recently, the petroleum refiners in the area conducted a research program under the auspices of the Stanford Research Institute which has resulted in a major and costly effort to control evaporation and processing losses.

Since the problem still remains, attention is being turned to other avenues. Current theory engaging attention is that hydrocarbon effluents, in the presence of ozone and strong sunlight, undergo some chemical reaction responsible for the eye-irritating haze. While this theory is not conclusively proved, it is based upon strong circumstantial evidence. In fact, in the absence of conclusive evidence, it has been conceded that hydrocarbons from vehicle exhaust must have some contributing effect. How much no one knows at this writing. It may be quite negligible and unimportant. But again that must be proved conclusively.

In any event, the hunt is on and the automotive industry has undertaken to do its part in the public interest. However, scientific investigations take time and a lot of money. A long range program may take five years, more or less, before any conclusive evidence can be presented.

"I make more money on every carburetor job...with

Snap-on**

Special Carburetor Service Tools"



Take the whole wide run of service jobs... only automatic transmissions will average trickier and more time-consuming than modern carburetors! But your money-making angle is no different than with a lot of other jobs... skilled know-how *plus the right tools!* Particularly on carburetor work that means *special* tools. A selected set of correctly designed "Specials" that will help you handle the tedious, poky operations deftly, swiftly, *profitably*. Your Snap-on Man has them for you... gauges (many special types), pullers, inserters, unloaders, extractors, wrenches, bending tools, sockets... a complete range of "Specials" most needed for servicing each model of carburetor on all modern cars. Available also in complete sets with necessary standard wrenches. Ask your Snap-on Man to show you the many new Snap-on carburetor "Specials."

SNAP-ON TOOLS CORPORATION

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que, a Franklin, two Panhards, an Olds Tonneau, a Yale, a Pope-Toledo and a Buckmobile — ranging from 8 to 70 horsepower. Other cars that joined as the tour progressed included a Mercedes, Napier, Columbia, Packard, Pierce Great Arrow and a Phelps.

A notice sent to the participants before the start outlined the con-

duct expected from all involved in this tour. Harlan W. Whipple, president of the A.A.A., signed it.

"The A.A.A. wishes to call particular attention of the participants to the manner of their conduct in driving their machines. . . . We want you to join loyally with us in being particularly careful during this time as to the way you meet

and pass teams, in avoiding racing and in the observation of speed laws . . . any flagrant violations will result in disqualification . . . careful attention to these regulations will do the cause of automobiling more good than anything else we can do. . . ."

This letter is noteworthy because everyone started the tour with the best of intentions regarding speed laws. But soon many were caught up in a wave of amateur competition and away they went "scorching" down the road. Who among them was found to be one of the chief scorchers? None other than Harlan W. Whipple, president of the A.A.A.

The 'Highways'

The tourists' greatest preoccupation was with the condition of the roads, some of which had never been traveled by car. "The road was a ribbon of splendid country highway with broad, well worn ruts up and down hills." At another point they were described as "hell with the lid off," causing some cars to snap drive chains, while others hit washouts where the flywheels and differential casings struck bottom. It was along this stretch that Charles J. Glidden lost his patience and delivered his now famous blast at New York roads. He said, "The Finns have better roads than these and they call them trails. . . . These roads are a blot on civilization."

Over one-third of passenger cars in the U. S. are more than 10 years old. Almost 2 per cent are 19 or more years old.

Chickens and Farmers

Poultry and the local citizens sometimes presented obstacles, too. Charles J. Glidden swung his Napier around a corner and came face to face with a shotgun. The farmer behind it said, "One dollar for that dead chicken." "That gun looked as big as a cannon and I stopped," said Mr. Glidden. "I didn't kill the chicken but . . . I paid the man. . . ."

One day after hours of slow going, the drivers finally had a chance to let the cars "stretch their legs."

(Continued on page 100)

YOUR SALES-HARVEST SEASON IS COMING!



Power-Pill Type

Stock these money-makers now!

● Before you know it, fall and winter business will be starting—time for winter car-conditioning, and time to replace over-aged or inefficient car thermostats with Autostat. Extra profit for you!

FOR SEALED OR OPEN COOLING SYSTEMS



Bellows Type

With Autostat, you can meet the requirements of any type cooling system . . . satisfy any car manufacturer's preference . . . duplicate any original equipment thermostat.

Autostat is quality-made, backed by the pioneer maker of automobile thermostats. Easily installed. Liberal profit margin. Handy "Merchandiser" carton doubles as display, contains assortment of most wanted models. See your jobber, or write Dept. PMA, Robertshaw-Fulton Controls Company, Fulton Sylphon Division, Knoxville 1, Tennessee.

AUTOSTAT*

*Trade Mark Reg. U. S. Pat. Off.

MOTOR THERMOSTATS BY FULTON SYLPHON

HOLD OIL ECONOMY HIGH

with "Flex-S"

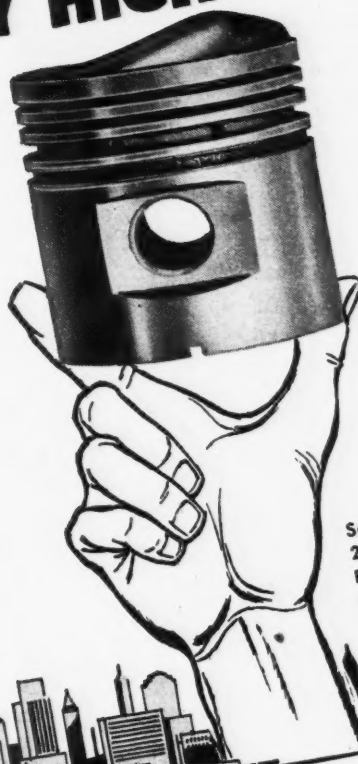
Steel Oil Rings

"heart" of

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ring sets



See Section
2-E of your
Buick Shop
Manual

HIGH-CARBON STEEL — with continuous Flex-S union and exclusive strut support, assures uniform contact and tension all around.

OPEN DESIGN — with offset sectors and square-ground ends, provides controlled lubrication and oil drainage.

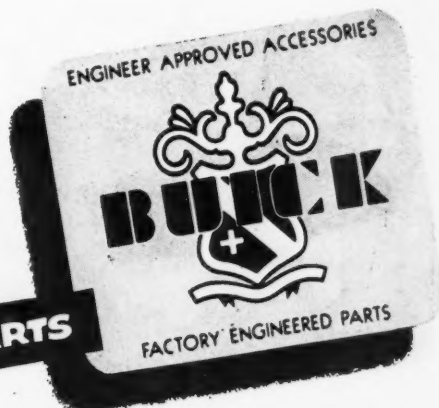
EASY TO INSTALL — snaps into place, hugs the groove, Granoseal prevents scuff and score during break-in.

BUY THEM FROM YOUR BUICK DEALER — at full discount.

Did You Know that each piston in a 1954 Buick
SUPER makes 86 strokes every second at 60 mph?

BETTER WORK WITH

FACTORY ENGINEERED PARTS



SEE YOUR BUICK DEALER

Fifty Years Ago Continued from Page 98

"Seventy-two miles went under the wheels at from 20 to 48 miles per hour and chickens and dogs gave up their lives all along the way. . . . The dead strewed the way, it must be admitted. . . ." reported Ed Spooner.

Time was no object on the St. Louis tour. So, upon invitation, the travelers often stopped to lunch

with the local ladies in their gardens.

Entertainment could be found at the day's end, too. Banquets and stag parties were set up for the autoists at most major stops along the way.

Breakdowns and Accidents

There was very little news re-


ported publicly as to the mechanical performance of the cars on the tour. Any minor repair needed was readily made by the drivers who took this as a matter of course. However, there were some happenings considered impressive enough to be discussed.

At the bottom of a sandy hill the Cadillac turned over on top of the driver and passenger, injuring both. A White and a Winton flipped over attempting to take a turn too fast. The Rambler turned-turtle but kept on going as if nothing had happened. Perhaps the most costly accident happened when the Peerless tried to step out of its own "weight class." As Ed Spooner puts it: "The huge automobile attempted to ram a moving express train from the track and failed, emerging with the front wheels and radiator ripped away and the engine unseated."

Your Jobber is your Technician

He is your source for technical data and how-to information, which is supplied to him by America's leading manufacturers to the automotive after-market. He stocks for you nationally advertised, time-proven lines, all the things you need to service every make and model of vehicle that comes into your shop. He is your technician and your supplier. Patronize your Jobber.

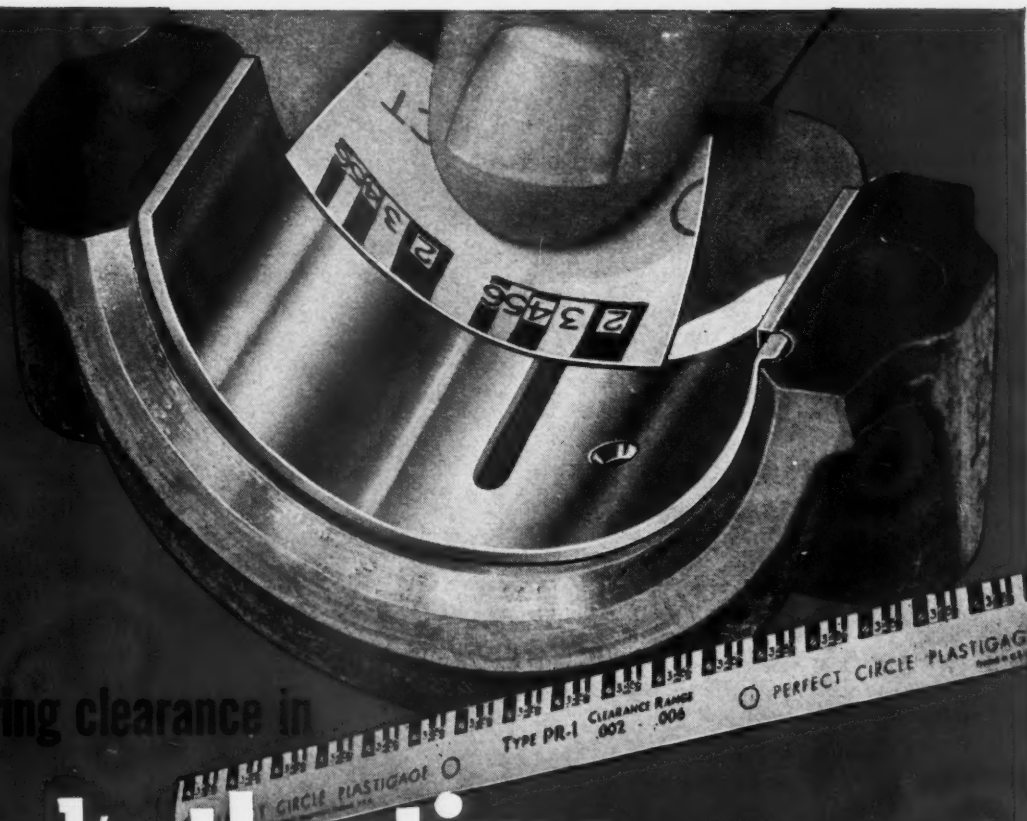
This message is published by Neapco Products Inc., Portstown, Pa., makers of Universal Joints, Power Take-Off Joints, and Chassis Parts. NEAPCO




"Haste makes waste" was the cry and more cautious driving was now the rule in the caravan.

Even careful driving could not prevent some accidents. During a night stop some tourists started to repair their machines in the local garage. While fixing the gasoline drip cock on a brand new Oldsmobile they got the lamp too close and the gasoline poured right on the flame. A blaze shot up and someone yelled "fire." The door of the hotel across the street banged open and a man in nightclothes fairly flew to the garage. He hit the door at full speed, putting his arm right through the glass and all but smashed his face. The man did

(Continued on page 102)



Check bearing clearance in

$\frac{1}{3}$ the time with Perfect Circle's **PLASTIGAGE**

Used on more than 3 million engines, recommended by leading engine manufacturers!

It's true! With Perfect Circle's PLASTIGAGE, you can check bearing clearances *easily* and *accurately* in as little as one-third the time required by other methods!

The exclusive easy-to-read Plastigage scale defines bearing clearances at a glance, prevents mistakes, and reveals a major cause of comebacks. There is no other product like it on the market. Use it on every engine overhaul! Perfect Circle Corporation, Hagerstown, Indiana. The Perfect Circle Co., Ltd., Toronto, Ontario.

Perfect Circle

The standard of comparison



Restore bearing clearances quickly, accurately, correctly with Perfect Circle

BEARING ADJUSTERS

Pre-cut to exact size!

The Sure Way to
More Profitable Engine Overhauls

PERFECT CIRCLE POWER SERVICE

1. (a) **WEAR GAUGE**—quick, accurate check for top groove wear.
- (b) **MANULATHE**—regrooves worn top grooves.
- (c) **STEEL TOP RING GROOVE SPACER**—restores correct top ring side clearance and retards top ring and groove wear.
2. **PERFECT CIRCLE 2-in-1 CHROME PISTON RINGS**—more than doubles the life of cylinders, pistons and rings.
3. **MURLIZING**—restores worn pistons to original fit.
4. **PLASTIGAGE**—checks bearing clearances easily and accurately.
5. **TAPER SHIM BEARING ADJUSTERS**—assure correct bearing clearances in main and connecting rod bearings.

Fifty Years Ago Continued from Page 100

save his own car and helped move the others.

That Unlucky Mortal

As Mr. Spooner suggested at the time, "The Trials and Tribulations of B. Clifford Swinehart, the Solid Tire Man," would be a good title for a story.

Mr. Swinehart started confident-

ly on the tour in his 16 hp Yale, equipped with Swinehart clincher (solid) tires. He quickly came to grief when he hit a dog. The dog limped away, but the Yale just sat with its carburetor petcock broken and the gas streaming away. This delay was short but he was forced to drive on with one cylinder—the other out of commission.

A short time later our "hero" suffered another mishap. A mechanic left a lathe tool in the Yale's gear case after tuning the car in New York. A jolt bounced the tool into the gears, stripped them, broke the shaft and wrecked the case in one long blood-curdling clash of metal.

Undaunted, Mr. Swinehart shipped the car to Toledo for new parts and again joined the tour from there. On the last day's run the Yale snapped a steering knuckle and ran into a ditch. He repaired this and started out again.

The bad roads got him once more. This time his radiator broke and would hold water only a short time. Hour after hour, through the mud and night he plodded, adding water frequently. Once he had to walk half a mile for a rubber hat full of water. He made the trip four times to fill the tank.

With all his trouble, Mr. Swinehart did make St. Louis in time for the parade into town.

Small Cars Win Prestige

The St. Louis tour demonstrated some facts that autoists previously did not realize. It seems that little

There are two kinds of women—those who wish to marry, and those who have not the slightest desire not to. "Exhaust"

cars did much better during the run. The larger cars went speeding along at 40 mph half the time and fixed flats and broken parts the other half. Smaller cars just bounced merrily along at 20 mph and usually made the distance in much less time with fewer mechanical troubles.

American and foreign car manufacturers watched with great interest. Several of them sponsored cars on the tour and they seldom had the opportunity to get such complete road data as this offered. One company wired its driver to "report at once minutely all that you discover regarding the car; where nuts loosened; weak parts if any, and suggest any improvements. . . . We wish to use your report in our work upon the cars

(Continued on page 104)

ONLY LIQUI-MOLY HAS PROOF!

No other motor oil supplement has been granted the certified test award by Motor Vehicle Research, Inc.

TESTS PROVED → **LIQUI-MOLY** reduced oil consumption **56%**

TESTS PROVED → **LIQUI-MOLY** reduced gas consumption **17%**

TESTS PROVED → **LIQUI-MOLY** actually plates internal engine parts with a tenacious protective coating.

TESTS PROVED → **LIQUI-MOLY** drastically reduces engine friction... cuts engine wear and overheating.

TESTS PROVED → **LIQUI-MOLY** assures prolonged protection against engine seizures even if all oil is lost.

TESTS PROVED → **LIQUI-MOLY** lubricates before oil starts flowing... prevents dry starts.

These are certified facts... the complete technical report of Motor Vehicle Research, Inc. available on request.

LIQUI-MOLY **SUSPENSION**

\$1.50 16 oz. can For 3 months 22 oz. can \$3.75

Money back guarantee covers every Liqui-Moly treatment. Over 2,500,000 cans sold to date for cars, trucks, buses, tractors.

Liqui-Moly is advertised in The Saturday Evening Post... Popular Mechanics... Popular Science... local newspapers. You get FREE display racks... window streamers... counter cards... posters.

HERE'S WHY LIQUI-MOLY IS DIFFERENT!

- Liqui-Moly contains no kerosene, graphite or detergents.
- Liqui-Moly is not affected by engine heat, pressures, or acids.
- Liqui-Moly is the only product made by the original, exclusive A. J. Lockrey process by which Molybdenum Disulfide particles are submicronized (reduced to less than one micron) and held in continuous suspension—there's no need to remove the filter.

FOR QUICK TURNOVER... TO HELP YOUR CUSTOMERS AND YOURSELF

Simply add one can of Liqui-Moly to crankcase oil. Liqui-Moly then coats all engine friction surfaces with a protective anti-friction metal plating of slippery Molybdenum Disulfide. Engines gain new, smooth gliding power—not possible with oil alone.

PROTECT YOUR CUSTOMERS' ENGINES WITH COMPLETE LUBRICATION . . .

ADD AUTOMOTIVE LIQUI-MOLY ANTI-FRICTION ENGINE PLATING

Moly Motor Products Corp., LIQUI-MOLY Bldg., 1155 Broadway, New York 1, N. Y.



"You bet business is good"

It's no wonder automotive business in the Country-Side market is so good.

The 19,000,000 families who live in Country-Side America—in towns under 10,000, in crossroads villages, down country lanes and on farms—own more than half the nation's cars. They also account for most of the nation's service business. In fact, the majority of car dealers and independent repair shops depend on Country-Side America for a living.

The biggest sales and advertising medium here is the Country-Side Unit—the combination of Farm Journal and Town Journal magazines. Farm Journal is America's largest selling farm magazine. Town Journal is the only dual appeal

magazine devoted exclusively to Country-Side family interests. Together they reach and sell over 4,450,000 of the best families in America's biggest automotive market.

That's why more and more automotive advertisers are supporting their dealers through advertising in the Country-Side Unit. Dealers, of course, are delighted that they are,

because the Country-Side Unit gives them what *they* want—coverage among their own best customers and prospects like a local newspaper.

To find out what the Country-Side Unit does for you, send for the free Country-Side Analysis Sales Folder for your territory. Write Dealer Service Department, Farm Journal, Inc., Philadelphia 5, Pa.



+



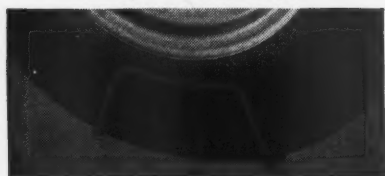
THE COUNTRY-SIDE UNIT...
4,450,000 of the best families
concentrated in America's biggest
automotive market
SELLS THE WHOLE
COUNTRY-SIDE MARKET

TWO SENSATIONAL NEW Winter Winners!

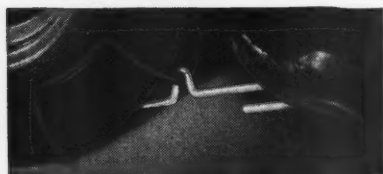
**Twin Profit Opportunities
YOU NEVER HAD BEFORE...**



Put Klips under rear wheels



Roll on for instant traction



Handy lever zips off Klips

**CAMPBELL'S
Sensational New
"KWIK-ON"
TIRE CHAINS**
Lug-Reinforced or Regular

Complete chains for continuous use. On the car in just one minute per wheel! Easy—quick—clean. Special plastic sleeve protectors with each set. The exclusive "Kwik-On" feature takes the struggle out of putting on chains. Stock "Kwik-On" . . . you'll even sell motorists who already have conventional chains!

- No Jacking Or Moving Car—No Dirty Work!
- No Hard-To-Fasten Inside Lock—Go On Easily In Snow, Ice Or Mud!

Check your jobber—today! Get your supply of these sure sellers. Add both items to your winterizing program. They're consistently advertised in . . .

LIFE and The SATURDAY EVENING POST

CAMPBELL CHAIN Company

MAIN OFFICE, YORK, PA.

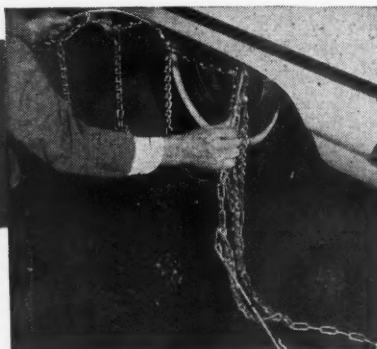
West Burlington, Iowa; Portland, Oregon; Sacramento, Calif.

Chain for every need . . . industrial . . . farm . . . marine . . . automotive

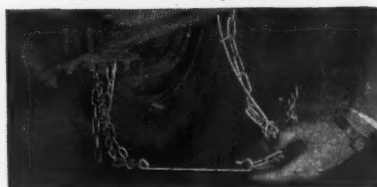
**CAMPBELL'S
Revolutionary New
"TRACTION
KLIPS"**

The greatest trouble-savers since the spare tire! Tuck under the rear wheels—roll on—roll away. Even spinning wheels will pick up Klips—give sure traction out of ruts . . . up slippery hills . . . away from icy gutters. A must for every motorist. A brand new item that can't help but sell! Box makes attractive display.

- On In 10 Seconds!
- No Dirty Hands Or Clothing!
- Can't Damage Tires!
- Handy Lever Zips Them Off Quickly!



Use handles to drape on chain



Put jiffy hook in last link



Adjust the chain and lock

Fifty Years Ago . . .

Continued from Page 102

of 1905."

One of the few performance claims reported from St. Louis was that the Pope-Toledo had New York water in its radiator from start to finish and it had not been replenished. Also, it was claimed that the spark plugs were not even looked at en route. This was no small accomplishment for that day and age.

The New York cars made the entire sixteen day jaunt. These, added to the cars that climbed aboard all along the way, made



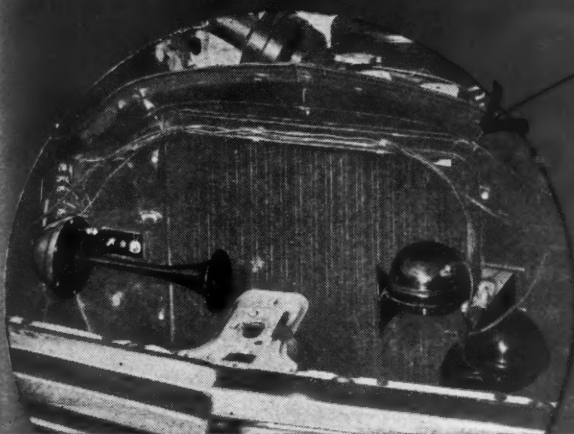
quite a little army. They numbered 66 as they paraded into St. Louis.

The success of the tour is best described by a MOTOR AGE editorial of the day. "When it (the tour) was first suggested last winter by MOTOR AGE it was absolutely nothing but a hope . . . hard work has brought about . . . the longest tour of this size ever accomplished. . . ."

"The tour stands as a demonstration of the fitness of American automobiles for hard cross country work. . . ."

"This tour . . . inaugurates the era of motor touring."

Auto dealers provided more than 6,000 new passenger cars for high school driver training programs in 1952.



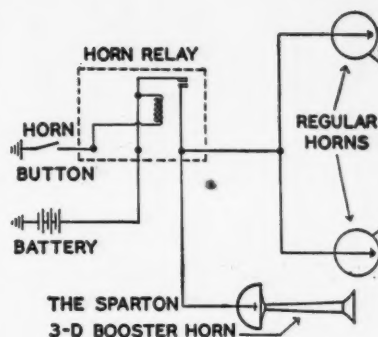
This third horn makes
the safety difference
in **HIGHWAY** traffic

WINNING TRIO

Sparton **3-D**
THE BOOSTER HORN

300% INCREASE IN WARNING POWER

Motor car horsepower has increased 72 percent since 1930. Number of cars on the road has doubled. Horn power has not kept pace. Standard horns are too low, too weak for the hazard of modern traffic. By installing the new Sparton 3-D booster horn under the hood with the present dual shell-type horns, horn warning power is stepped up 300 percent! Together the three horns make a winning trio—they win safety for motorists, sales for you!



THE SPARTON
3-D BOOSTER HORN
**EASILY INSTALLED WITH
PRESENT HORNS**

The Sparton 3-D booster horn may be added to the dual shell-type horns found on most modern cars. It is low in cost, easy to install.

ANGER

Traveling sixty miles an hour with windows closed (radio and heater off) the driver in the car ahead can't hear your warning signal given by standard horns until your car is wheel to wheel with his.

SAFETY

Installed with present dual shell-type horns, the Sparton 3-D booster horn blows in unison with them. When you press your horn button you get a harmonious, penetrating signal that the driver in the car ahead, traveling sixty miles an hour, can hear three car lengths before you pass.

MAKERS OF
QUALITY
AUTOMOTIVE
EQUIPMENT
SINCE 1900

Sparton
AUTOMOTIVE

Division of
THE SPARKS-WITHINGTON
COMPANY

JACKSON,
MICHIGAN

hear it!

Send coupon for free phonograph record and hear how the Sparton 3-D horn boosts horn power.

NAME _____

ADDRESS _____

CITY _____ STATE _____

New Products Continued from Page 54

394. Plastic Sealer

Champion Bronze Powder & Paint Co., Inc.: Used in repair work and as a dielectric protective for vehicles, Sprayon plastic sealer is now available through this company. The claim is made that the sealer sprays on any surface and dries quickly to a non-tarnishing, flexible finish. It insulates ignition and wiring against short

circuits and protects chrome trim and accessories. This sealer comes in a 12-ounce aerosol can with a patented non-clogging nozzle.

395. Brake Fluid

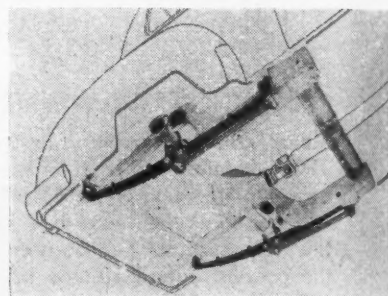
Supco: A brake fluid, which is claimed to exceed S.A.E. specifications for "heavy duty" has been introduced by this maker.

The fluid, known as Supco "15", is designed for a safe operating range of from 60 degrees F. below zero to 300 degrees F. above zero. This range assures safety against freezing in extremely cold climates and vapor lock under excessive heat, according to the manufacturer.

Supco "15" fluid is available in 12 oz., pint, quart and gallon cans; 5 gal., 30 and 54 gal. drums.

396. Torque Arrester

Auto Master Corp.: Improved control, quicker stopping and greater tire mileage are some of the claims made by the manufacturer for its "Traction Master." The device is a bar which is installed on the forward section of the right rear spring. It is said to be a combination of the Hotchkiss and Torque Tube drive. The unit



prevents the flexibility in the spring created by starting and stopping inertias. It is also said to keep the rear wheels on the ground at all times.

397. Hood Lock

Superior Screw & Mfg. Co.: A device that replaces the conventional hood release latch on many late model cars makes it impossible to open the hood except when released from inside the car, this company says. With the "Aldo Hood Lock" under-the-hood equipment can be protected by the motorist if he locks the car in the regular way. The hood lock comes in a do-it-yourself kit with all necessary parts and step-by-step instructions. A special spring latch is operated by a long, flexible steel control cable leading to a control handle mounted on or under the dash, which unlocks the hood with a single pull.

(Continued on page 108)

Exclusive

WITH

POWERFLEX®

CLUTCH PLATES

Proved in actual use for years . . . Accurate's Flat-top Cushion design is today's best answer to clutch facing wear. Not like ordinary marcel-wave type cushions that wear facings unevenly and cause scoring of flywheel and pressure plate . . . the Accurate Flat-top cushion design incorporates flat, parallel cushion surfaces that distribute wear evenly over the *entire* facing surface. The Accurate Clutch lasts longer and *retains* its cushioning efficiency. Additional exclusive Accurate features include special patented spring supports and self-aligning hub splines. This, plus complete vehicle coverage, makes Accurate the *one* outstanding clutch line on the market today. Ask your Jobber about Accurate.

The Accurate Clutch Set includes a new Powerflex® Clutch Plate and a precision re-manufactured pressure assembly . . . the perfect pair.



Accurate

CLUTCHES

ACCURATE PARTS MANUFACTURING CO.

1600 S. Ashland Ave., Chicago 8, Illinois

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ST, 1954



Now only 2 ring sets needed to service all 1942-1954 6-cylinder Plymouths, Dodges, De Sotos, Chryslers



EASY INSTALLATION. All MoPar piston rings are packed, complete with instructions for installation, in convenient "Time-saver" envelopes—each envelope showing proper sequence of use.

Simple to order, stock, sell, these 2 MoPar piston ring sets require a minimum of capital, minimize paperwork, conserve stock space, bring a quick return on your investment. And because they're *official* Chrysler Corporation parts, factory engineered and inspected, they assure complete customer satisfaction!

★ ★ ★

MoPar is more than just the name of top-quality piston rings. It is the name of the thousands of parts and accessories designed especially for Plymouth, Dodge, De Soto, and Chrysler cars, and Dodge trucks.

MoPar Chrome Master Piston Ring Sets	
MODEL OF CAR	PART NUMBER
1942-1954 Plymouth, Dodge (6-cylinder)	1450 124
1942-1954 DeSoto, Chrysler (6-cylinder)	1450 136

FIT ALL 6's. One set fits all 1942-1954 Plymouth and Dodge 6-cylinder cars; the other set fits all 1942-1954 6-cylinder De Sotos and Chryslers. See application chart for part numbers.

**PARTS DIVISION
CHRYSLER CORPORATION
DETROIT 31, MICHIGAN**

New Products Continued from Page 106

398. Dealer Package

Gem Mfg. Co.: A 6-item "package" of service station ware, is now available from this company.

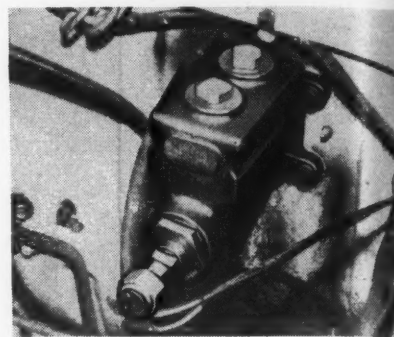
The pack includes a pistol oiler, a radiator filler, a transmission funnel with flexible tube, an oil can dispenser, a one-quart measure with flexible spout, and a pump oiler. A half-gallon "Corky

Cooler" picnic jug for hot or cold foods is included as an extra.

399. Power Brake Cylinder

Minnesota Automotive, Inc.: Formerly used only on trucks, the Mico power brake cylinder is now available for any make or model automobile. According to the company, this cylinder is in reality a

cylinder within a cylinder that adds to the braking power of the standard master cylinder. To in-



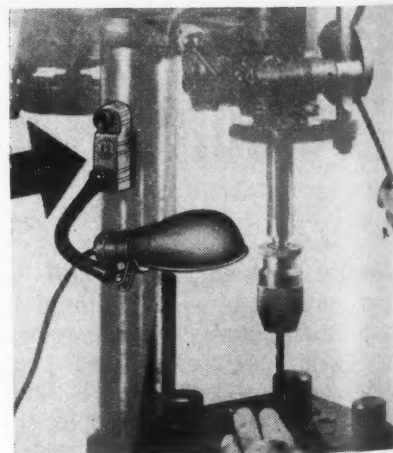
stall the brake unit the mechanic simply removes the standard master cylinder and replaces it with the Mico cylinder. It operates at full pressure whether the motor is on or off, and is not affected in any way by the operation of the automobile, the company claims.

400. Oil Filter Signal

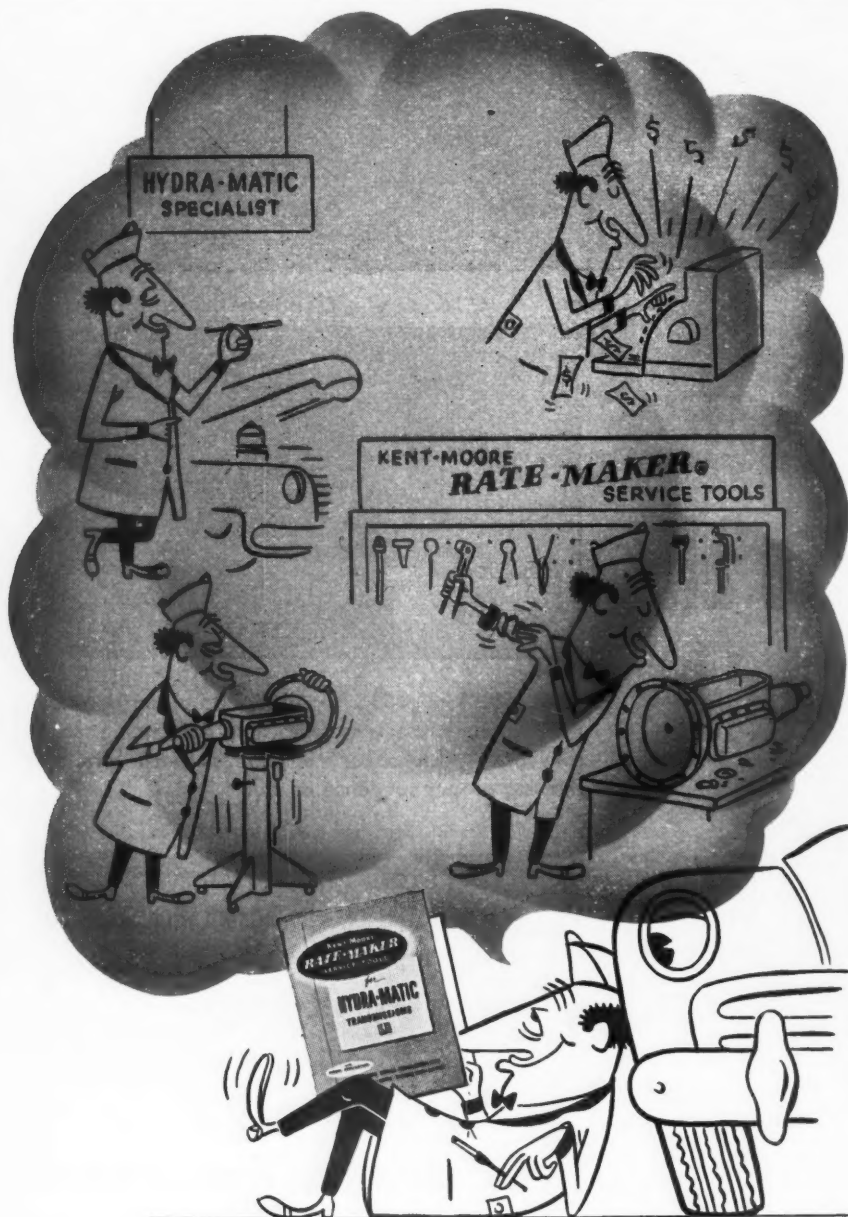
Filtr-Gard Co.: A device known as "Filtr-Gard" can be installed on any full flow oil filter. The unit flashes a warning light on the car dash when the filter element becomes clogged and dirty, regardless of mileage. Installation time is said to take approximately 15 minutes.

401. Utility Light

Enco Mfg. Co.: A feature of the lighting unit marketed by this company is its magnetic base which holds it in place. The 125 pound magnetic pull is said to prevent the light from being dis-



lodged by the vibration of running machinery. Known as the "Tiny-Titan," the unit is said to accom-
(Continued on page 110)



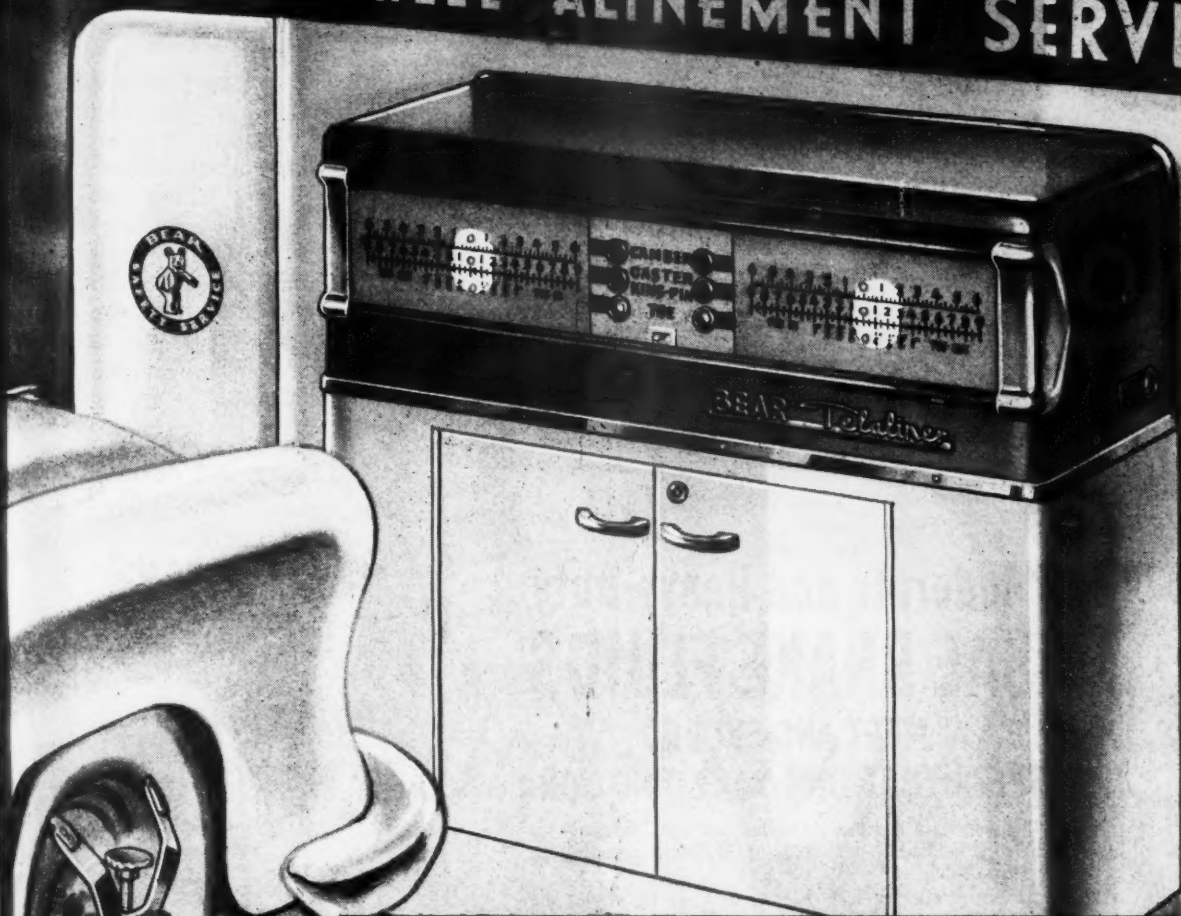
While Chadwick daydreams why don't you do something about cashing in on high-profit Hydra-Matic special service? See your local Kent-Moore Jobber for the "Rate-Maker" Tools you need!

KENT-MOORE ORGANIZATION, INC.

5-105 GENERAL MOTORS BLDG. • DETROIT 2, MICH.

the *Finest*...

BEAR Telaliner WHEEL ALIGNMENT SERVICE



"BEAR" Telaliner... the Finest for PROFIT and PRESTIGE!

For those alert shop operators who appreciate what the *Finest* can do in building high-class clientele and the higher range of profits that goes with that type of business, the "Bear" Telaliner Alinement Service is the last word. In Telaliner, you get the *Finest* in Clarity... the *Finest* in Versatility... the *Finest* in Profit-Making Showmanship, Convenience and Appearance... as well as the *Finest* in Advertising Support, including national ads in the Post.



For full details on all the *Finest* Features of this amazing electronically-controlled wheel alinement service, see the beautiful, new Telaliner Brochure. Realism, as only the beauty of full color can reproduce, virtually places the Telaliner "right in front of you" so you can see, examine and study it, feature by feature. Ask your "Bear" Jobber to let you see the new Telaliner Brochure, or write: Bear Mfg. Co., Dept. M-1, Rock Island, Illinois.

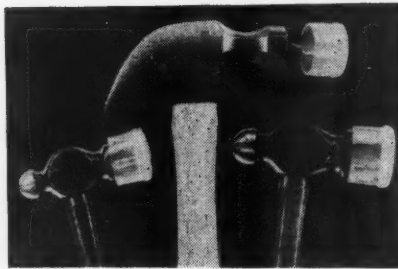
Look to "Bear" for Everything in Safety Service: Wheel Alinement Machines, including Telaliner and Drive-Over Tester; Wheel Balancers, Dy-Namic and On-A-Car types; Crankshaft Balancers; Brake and Headlight Testers; Frame, Axle and Wheel Straighteners; "Balantru" and other Tire-Truing Machines. Also, Balance Weights, Caster Shims, Coil Spring Spacers and Stabilizers.

New Products . . . Continued from Page 108

moderate up to a 100 watt bulb. It is further claimed that the unit's 9-inch flexible stem and magnetic base permit positioning of the light at every angle.

402. Plastic Hammer Cap

Lempco Automotive, Inc.: A nylon hammer-head cap to fit all



standard ball peen and claw hammers is now being marketed by this company. The molded cap makes any hammer a nylon hammer, for working on wood, glass, plastic or metal and will not chip.

The cap is said to be easily applied and removed and it does not interfere with the "balance" of the hammer.

403. Hangar Iron

Paine Co.: A perforated hangar iron useable for such things as tail pipe hangars is now being offered in a merchandiser carton by this maker. The individual packages contain a 10-foot length of the iron, which is $\frac{3}{4}$ -inch wide, 20 gage, zinc plated steel. The holes take $\frac{1}{4}$ -inch bolts and a length of the iron is said to support 500 pounds safely. The merchandiser contains 24 units.

404. Charger-Tester

Fox Products Co.: Four chargers in one is the claim for the combination charger and tester



Moderate and Heavy-Duty SAE BRAKE FLUIDS

MEET AND EXCEED SPECIFICATIONS 70R2 AND 70R1

The same care and exactness that has won leadership for EIS in Brake Parts is also found in EIS Brake Fluids. Both go hand in hand.

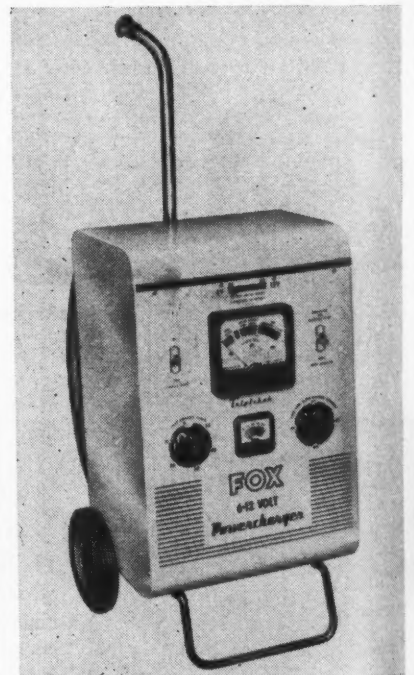
For a complete, long-lasting job, install new EIS Master and Wheel Cylinders.

"SUPER 40" (Moderate-Duty SAE-70R2) This brake fluid should only be used for light passenger car duty.
"SUPER 50" (Heavy-Duty SAE-70R1) Recommended for use in all vehicles under all operating conditions.



THE Complete BRAKE PARTS LINE

EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.



marketed by this company. The proper setting makes it a fast or slow 6-volt or 12-volt charger. In every case the tap switch is said to cover the full range of charge currents. The charger has six adjustable fast charges (3 for 6-volt and 3 for 12-volt batteries) for
(Continued on page 120)



PLR

(Production Line Research)

Takes the Guesswork out of **POLISHING PROFITS**

AMCOR POLISHING DISCS

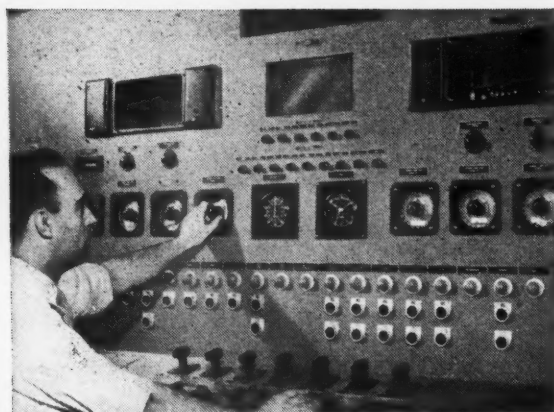
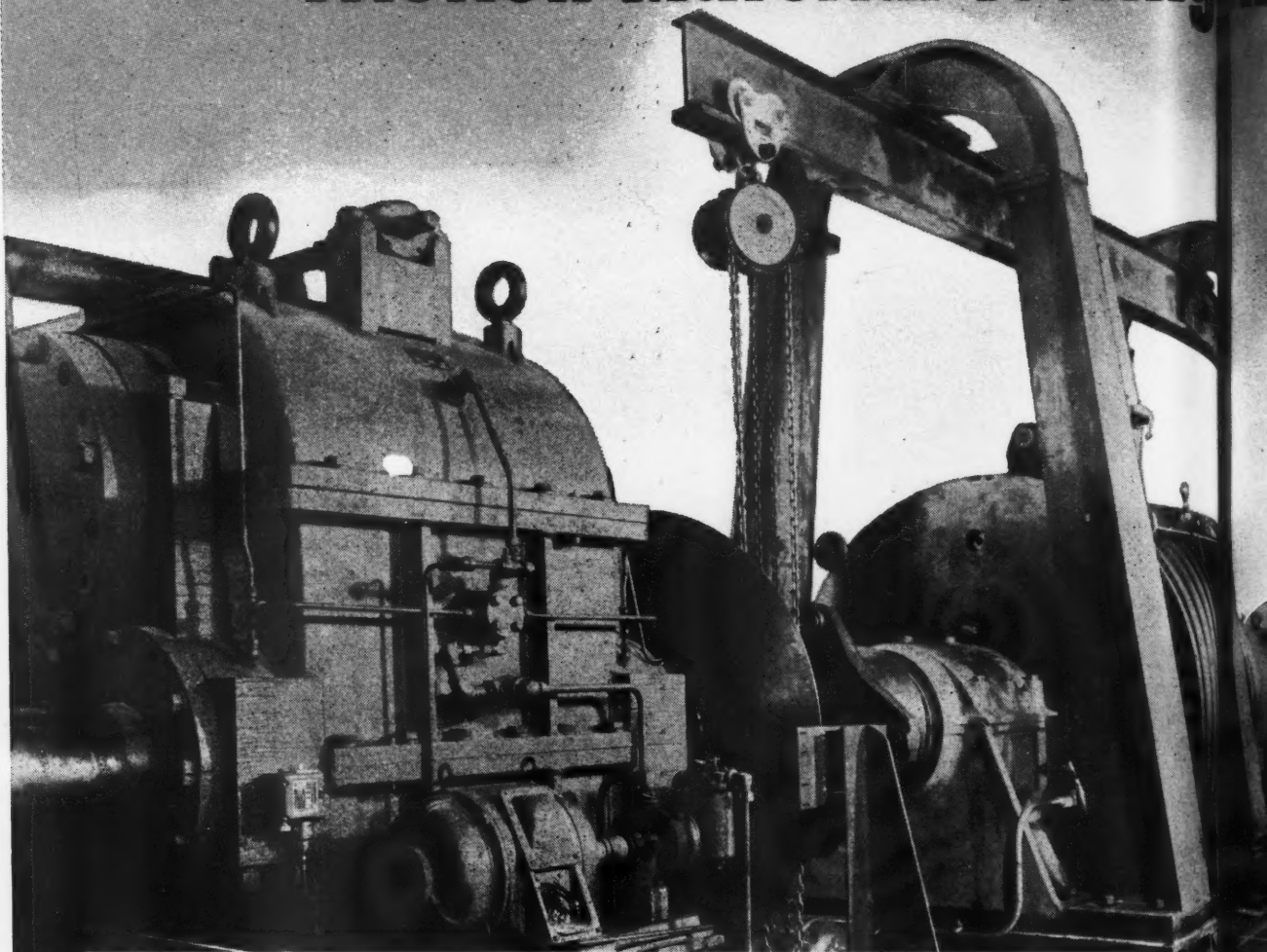
*See Your Jobber or Write for
Descriptive Folder*

The general use of Amcor pads for quick polishing and final finishing operations on thousands of new cars daily is convincing proof of the superiority of these pads. Of even greater value is the continuing research that goes hand in hand with these production line operations. Amcor Polishing Discs today reflect all the improvements in finishing and polishing learned in this exhaustive research. Whether you use Amcor pads for slush-rubbing operations, for cutting, for semi-finishing, or for final finishing and dry polishing, you can be sure that Amcor has the pad that's custom-built for the job in hand. Because Amcor pads cut faster, wear longer and clean easier, polishing, waxing and refinishing operations become more profitable operations.



MOTIVE MATERIALS CORPORATION, FISHER BUILDING, DETROIT 2, MICHIGAN

World's largest dynamometer Friction Material Testing



This new dynamometer—rated at 51,000,000 ft. lbs. K.E.—is the largest ever designed exclusively for evaluating friction materials.

Built with the precision of a fine watch, it consists of a driven shaft carrying adjustable flywheel discs. In operation, the huge flywheels are rotated at controlled speeds by means of electric prime movers. On reaching predetermined speeds a test brake lining or clutch facing cuts in to absorb the energy in the flywheel assembly.

The flywheel weights can be varied to match the inertia load of the widest range of vehicles—from light automobiles to the heaviest bus, truck, plane, machine or earth moving unit.

An electronic instrument panel automatically cycles the starts and stops during operation and at the same time accurately computes and records, torque, deceleration, brake input and temperatures.

Johns-Manville *asbestos*

Designed for Installed by Johns-Manville

Johns-Manville engineers and scientists
unveil new research facilities
especially created for the development
of high performance J-M Brake Linings
and Clutch Facings

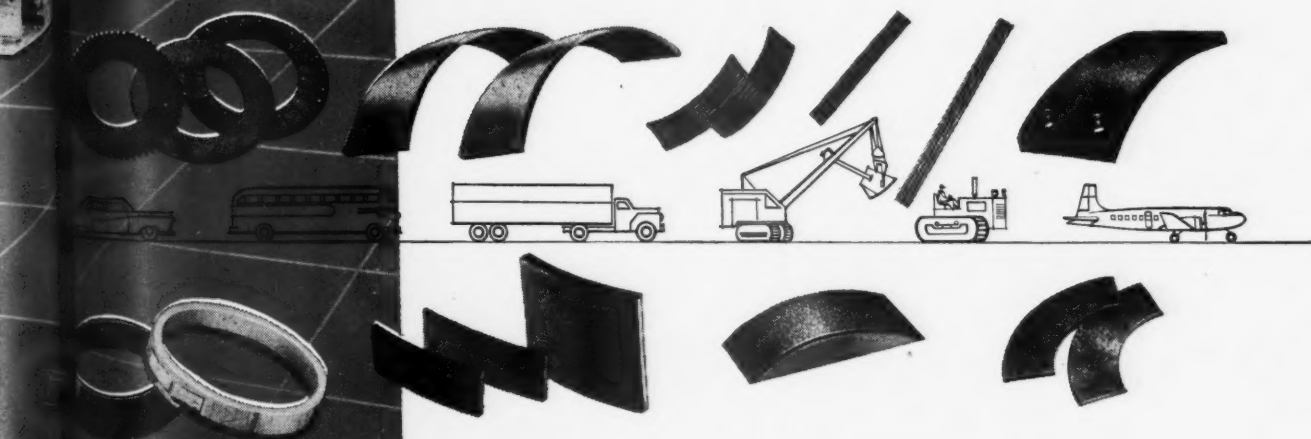
THIS HUGE inertia dynamometer—*left*—is only one of the many outstanding features of the new Johns-Manville laboratory at Manville, N. J. Along with other precision units, its research facilities promise completely new standards for measuring and improving the effectiveness of friction materials of every type and for every purpose . . . now and for the future!

Whether the problem involves checking the clutch of a small power mower or a huge diesel shovel—or the brakes of a car, bus, truck, machinery or plane—the sensitivity and accuracy of this new equipment broadens the opportunity for the investigation, evaluation and development of high quality, high performance J-M Brake Linings and Clutch Facing.

The recognized leader in Friction

Material development for 70 years, today Johns-Manville produces materials that are specified and used as standard original equipment on many leading makes of new automobiles, trucks, buses and industrial units. They are economical and dependable . . . provide stabilized friction for longer periods under grueling pressures and temperatures, withstand heavier shock loads and faster rubbing speeds.

The Johns-Manville engineering staff and the world's best equipped friction material development laboratory are at your service. Your Johns-Manville representative will gladly tell you more about this service . . . or write to Manager Automotive Division, Johns-Manville, 22 East 40th Street, New York 16, N. Y.



STABILIZED FRICTION MATERIALS



LOOK

reports on the

BIGGEST SAFETY-CHECK PROGRAM

in automotive history...

a program which stimulates action and sales . . . at the local level.

The pictures at right highlight some of the results from the vehicle maintenance campaign staged this May in cities from coast to coast by LOOK, the National Safety Council and the Inter-Industry Highway Safety Committee.

Here's why LOOK promotions provide a proven kind of merchandising:

1. They are keyed to the theme of safety . . . assuring community-wide support of the program.
2. They achieve public penetration with editorial coverage in LOOK . . . America's second largest magazine, read by 20,650,000 people, or one out of six of your customers.
3. Whether you are a dealer or a jobber, LOOK's automotive promotions give you the opportunity to spearhead a safety program in your city, and at the same time cash in on the extra service business developed.

For details on how you can tie in with future LOOK promotions, write today to: Woody Kingman, LOOK Automotive Merchandising Manager, 488 Madison Avenue, New York 22, New York.

LOOK

moves merchandise...fast



146 communities participated in all our city-wide campaigns (or 121 more than the 25 towns originally scheduled to participate). Shown here is check lane in Wilmette, Illinois.



More than 500,000 cars went through the special safety lanes for the 10-point inspections (and this includes returns from only the 146 cities reporting thus far). Here cars are checked at Daytona Beach, Florida.



Service sales increased as much as 50% according to early reports from dealers tying in . . . as motorists brought cars rejected at check lanes to local service outlets (like this one in Akron, Ohio).



Safety Parades like this one in Montgomery, Alabama, kicked off campaigns in many of the cities participating. 25,345 cars were checked in Montgomery's one-week program.

JUST ONE OIL

...builds better summer business!



NEW GUARANTEED QUAKER STATE MEDIUM HD OIL

with the

Miracle Film

MEETS EVERY SUMMER DRIVING NEED!

Quickest way to more business—and less work. It's Quaker State Medium HD Motor Oil—so good you can give new car owners a 35,000 mile guarantee!

Like all Quaker State products, this new oil is refined from 100% Pure Pennsylvania Grade Crude Oil, and is the result of over 50 years of leadership in automotive lubrication. Outstanding—because it forms the *Miracle Film* on moving engine parts.

And Quaker State says: Regardless of claims or talk of mystery ingredients, no motor oil made can surpass Quaker State for performance, lubrication, and oil and gas consumption qualities.

Made to be a summer best-seller!

AND FOR THE MORE SENSITIVE DESIGNS
OF NEW HIGH COMPRESSION ENGINES

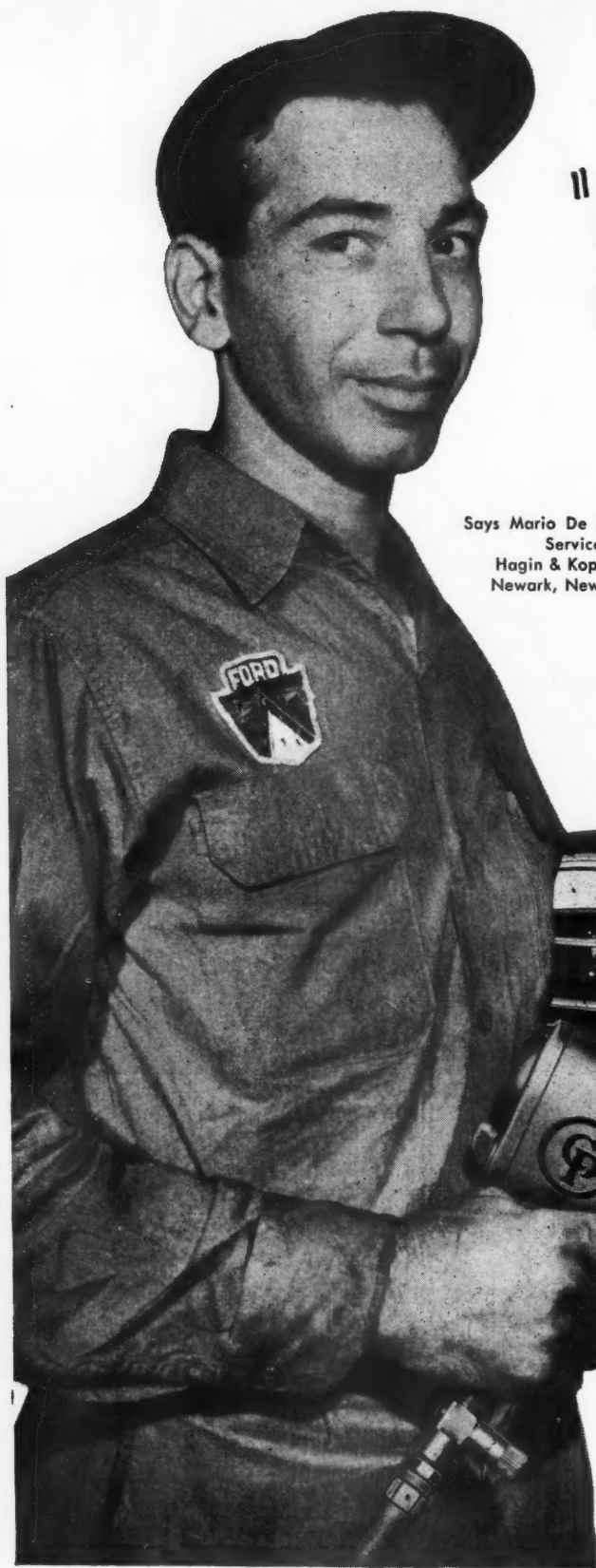
QUAKER STATE
MULTIPLE VISCOSITY
MOTOR OIL
5W-20 HD

Overcomes Engine Ping and Knock
Frees Sticking Valve Lifters
Prevents Camshaft and Lifter Wear
Increases Gas Mileage
For use where SAE 5W,
10W, 20W, or 20 grades
are recommended by
the manufacturer.



Quaker State—your sign of Quality

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA. Member Pennsylvania Crude Oil Assn.



Says Mario De Martino
Serviceman at
Hagin & Koplin, Inc.
Newark, New Jersey

"I've more than doubled my pay since I bought a **CP Air Impact Wrench**"

As Mr. De Martino puts it, "A man with a hand wrench spends up to 2 hours removing and replacing the two cylinder heads on a Ford V-8 engine. I can do the whole job in 20 minutes with my CP Air Impact Wrench." Mr. De Martino attributes his increased earnings to his CP wrench which he uses on radiators, clutches, mufflers, cylinder heads, U-bolts and everywhere else.

CP Controllable Power Air Impact Wrenches can be preset to turn nuts and screws to recommended uniform tightness — yet have plenty of extra power to remove even the toughest nuts. Small in size and furnished with attachable angle heads for those ratchet wrench jobs, they're available in 1/2", 3/4" and 1" square drive capacity models. For more details write *Chicago Pneumatic Tool Company, 8 East 44th Street, New York 17, N. Y.*



Chicago Pneumatic

AIR AND ELECTRIC IMPACT WRENCHES • PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP-GUNS, FENDER IRONS AND BEAD BREAKERS

GLOBE *Transmission Dolly*

... saves time and effort
in removing, servicing,
and replacing automatic
and conventional transmissions!



The Globe Transmission Dolly is a versatile, roller-mounted hydraulic jack that helps a mechanic make fast work of removing, servicing, and replacing automatic or conventional transmissions. What's more, it saves time and effort on a lot of other under-car lifting jobs. The hand-operated two-stage hydraulic ram has a capacity of 1,000 pounds, and an automatic by-pass valve prevents overloading.

The Globe Transmission Dolly can be used under any 2-post or "Frame-Kontakt"® Hoist. Adapters for handling various types of transmissions are available. Use the coupon to get additional information.

GLOBE

THE BEST LIFT

GLOBE HOIST COMPANY

E. Mermaid Lane at Queen Street, Phila. 18, Pa.

Globe Hoist Company
E. Mermaid Lane at Queen St.
Philadelphia 18, Pa.

MA-632

I'd like complete information on the Globe Transmission Dolly and
Globe Auto and Truck Hoists.

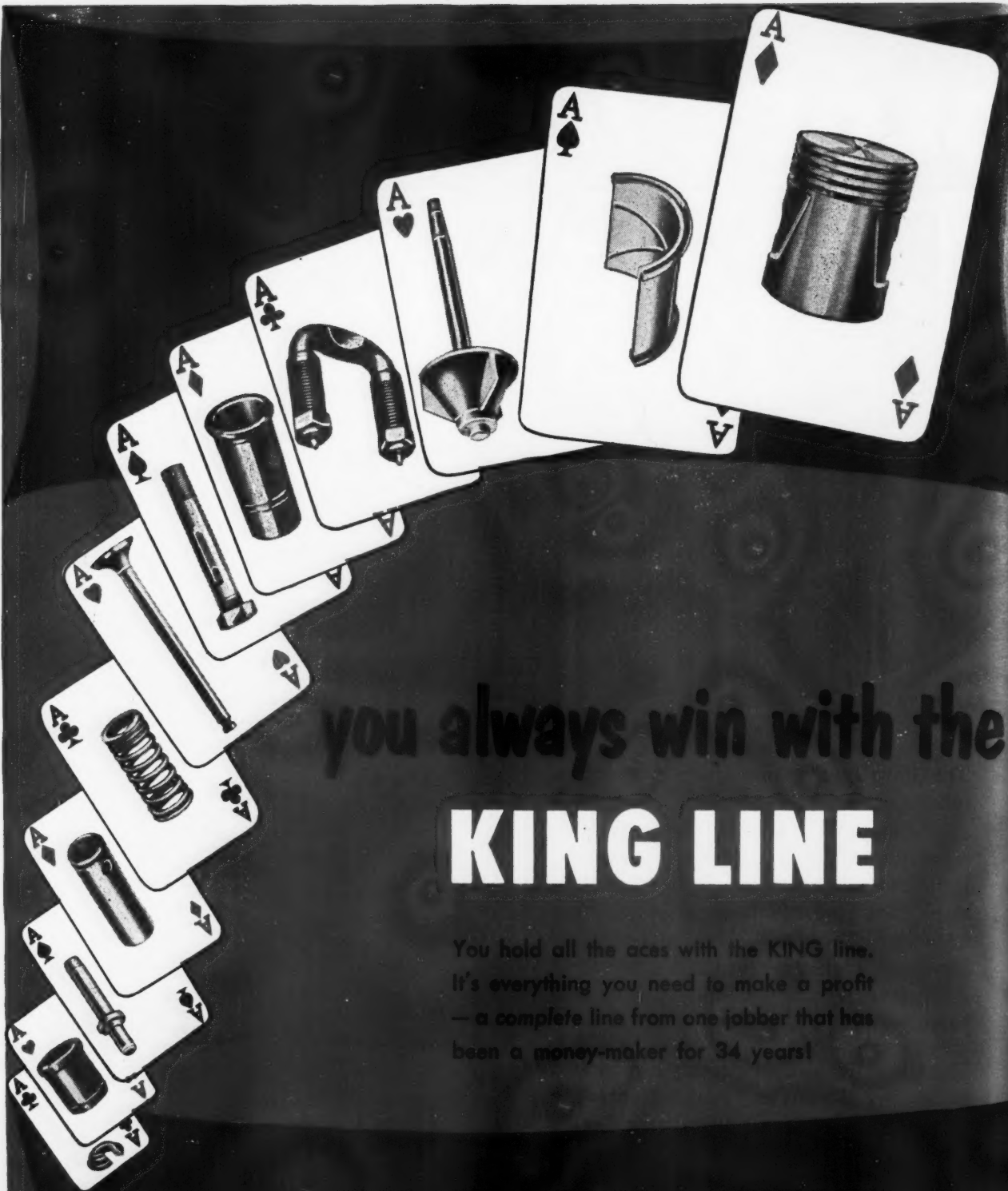
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Address.....

City.....

Zone.....State.....





you always win with the **KING LINE**

You hold all the aces with the KING line.
It's everything you need to make a profit
— a complete line from one jobber that has
been a money-maker for 34 years!

"BUILDING FOR THE FUTURE ON A 34-YEAR RECORD"



KING QUALITY



PISTONS • PINS • VALVES • BEARINGS • WATER PUMP PARTS • BOLTS
BUSHINGS • SILENT-U SHACKLES • SLEEVES • WHEEL SUSPENSION PARTS

SAINT LOUIS 10, MISSOURI

Best on any basis!

HEIN-WERNER

"G.G." 4-ton hydraulic service jack



STRENGTH



- Long, low-slung chassis provides utmost stability.
- Rugged steel side members are strong and safe.
- Load capacity is full 4 tons.
- Lifting range is 4" to 24".

DESIGN



- Trim, modern lines accent efficiency and ease of operation.
- Long, low construction permits easy spotting under cars and trucks with extreme overhangs.

SPEED

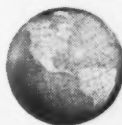


- Easily visible white swivel saddle permits instant spotting.
- High speed pump raises saddle to normal load in 3 strokes.
- Near-center location of swivel casters makes pivoting arc shorter.
- Handle is instantly responsive throughout 90° stroke.
- New pivotal unit provides greater efficiency through direct line operation.

SAFETY



- Trouble-free safety valve prevents overloading.
- Positive action release valve controls lowering of load.
- All controls are safely located at end of handle.



Ask your H-W jobber about purchasing equipment on easy time payment plan.

Hein-Werner manufactures and sells more hydraulic jacks than any other company in the world today.

Hein-Werner Corporation • Waukesha, Wis.

The complete Hein-Werner line of hydraulic jacks includes: Under Axle Jacks of 1½ to 100 tons capacity . . . "Bumper-Lift" Jacks for passenger cars . . . "Swift-Lift" and Service Jacks for shop use . . . Adjustable Car Stands . . . "Push and Pull" and "Pushmaster" Jacks for body, fender, and frame repair work.

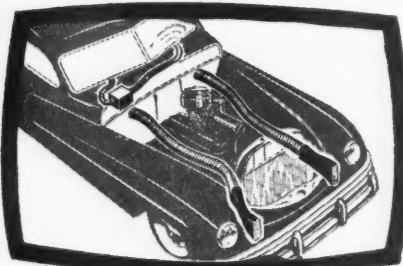
Hein-Werner
HYDRAULIC JACKS

**This Display SELLS
WIREMOLD
Air Duct and
Defroster Hose
replacements
to your customers!**



Order this Wiremold AIR DUCT and DEFROSTER HOSE DISPLAY PACKAGE today ... and bring in profits you're missing now. Contains one 6-foot length of each of the 6 most popular sizes — 1½", 1¾", 2", 2½", 3" and 4". The attractive 2-color display is FREE!

- ORIGINAL equipment on America's leading cars!
- BEST for replacements!



- Fits every make and model
- Easily bends 90° to 180°
- Easiest to cut and handle
- Very resistant to cold, heat, oil and water
- Saves 50% storage space — 6' lengths retract to 3' in package.

Write for full information.

THE WIREMOLD COMPANY

HARTFORD 10, CONNECTICUT

New Products

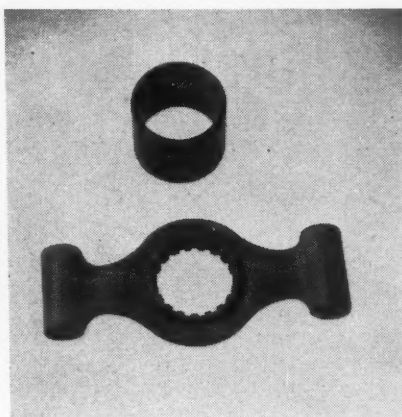
Continued from Page 110

quick charges and boost starts, and six adjustable slow charge rates.

The testing component, it is stated, provides three different tests: percentage of charge in the battery, battery condition and generator system.

405. Transmission Tool

Mel's Automatic Transmission Co.: A special service tool kit to be used on all General



Motors hydramatic transmissions, which consists of an impact sledge tool and a spacing sleeve has been marketed by this company. The purpose of this tool kit, according to the maker, is for the unlocking and removing of jammed or ripped front planetary gears. The unit requires no bolting or setting up. It is slipped on to the front unit drive gear and by striking it on the hammer heads it will unlock the jamed gears and will allow removal.

406. Thermostat

Robertshaw - Fulton Controls: A thermostat actuated by a compact thermal unit has been developed for use in pressurized cooling systems.

This unit is charged with a wax-like "Power-Pill" instead of volatile liquids or gases. The wax compound melts as the water in the engine cooling system begins to heat up and solidifies again upon cooling. A pronounced increase in volume of the wax-like

(Continued on page 123)

**NEW
Sprayon
PLASTIC
SEALER**



with
100%
Acrylic
Base

**SPRAYS A CLEAR, PROTECTIVE
COATING INSTANTLY THAT**

**INSULATES
WATERPROOFS...**

- Ignition and Spark Plugs
- Battery Cables and Wiring
- Metal Trim and Accessories

also ideal for TV-RADIO antennas, parts and wiring...protects, woodwork, blueprints, etc.

A real timesaver for your own shop work — a proven money-maker as an add-on sales item — Champion Sprayon Plastic Sealer with crystal clear acrylic base serves countless uses in the automotive trade. Sprayon Plastic Sealer is high in dielectric strength — sprays on any surface — dries quickly to a non-tarnishing, flexible finish. Insulates ignition and wiring against short circuits and damaging corrosion ... protects inside and outside chrome trim and accessories.

Available in handy 12-oz. aerosol can with patented non-clogging nozzle that takes only fingertip pressure for instant and sure application. This tool kit size container is popular with mechanics for on-the-job portability. Plastic Sealer also available in bulk with special Plastic Reducer.



**NEW
Display Material**

Eye-catching, compact counter displays for your dealers. Ask about Champion Deal #500.

Champion also makes the complete line of 38 Sprayon automotive Enamels — also Aluminum, White and Black Lacquers that are gasoline and oil resistant — Zinc Chromate Primer to prepare metal for quick, easy touchup. See your jobber or write direct.

REPS — Some territories still available.

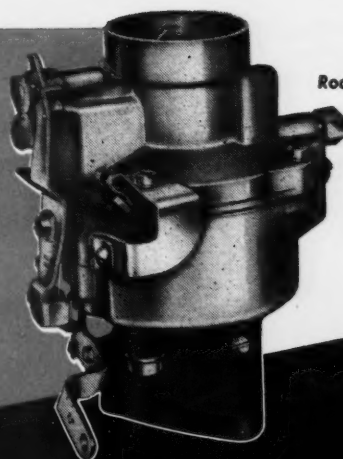
Champion Bronze Powder & Paint Co., Inc.

2526 W. Van Buren St. Dept. MOTO Chicago 12, Ill.

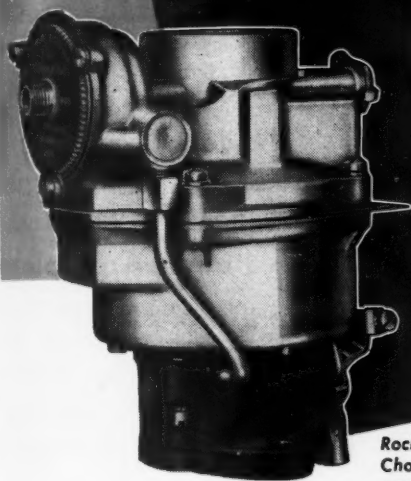
Chilton's MOTOR AGE, AUGUST, 1954



right
from the start...

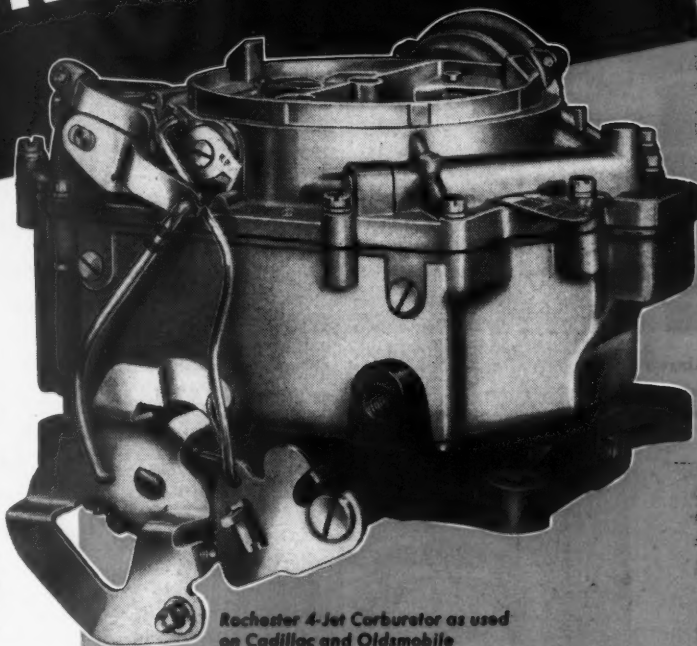


Rochester Manual Choke
Carburetor as used
on Chevrolet trucks



Rochester Automatic
Choke Carburetor as
used on Chevrolet
passenger cars

ROCHESTER CARBURETORS



Rochester 4-Jet Carburetor as used
on Cadillac and Oldsmobile

YES, right from the start Rochester Carburetors were designed, engineered and built by Rochester Products to give greater performance and economy. That's why, *right from the start* of the car's engine, every Rochester Carburetor automatically does a better job regardless of speed, load and operating temperatures . . . and continues to do so with a minimum of service.

PERFORMANCE FEATURES

- NO FUEL LOSS ON ANY INCLINE
- SMOOTH ACCELERATION WHILE TURNING
- EASIER STARTING IN HOT WEATHER
- CONTINUOUS FUEL FLOW—NO LAG
- POWER MIXTURE READILY AVAILABLE

SERVICE FEATURES

- FEWER PARTS TO SERVICE
- NO METERING ADJUSTMENTS REQUIRED
- PERMANENT IDLE TUBE—NO SERVICING
- NO WEAR AT JET ORIFICE

ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS
ROCHESTER, N. Y., U. S. A.

ALSO MANUFACTURERS OF ROCHESTER CIGAR LIGHTERS AND GM STEEL TUBING

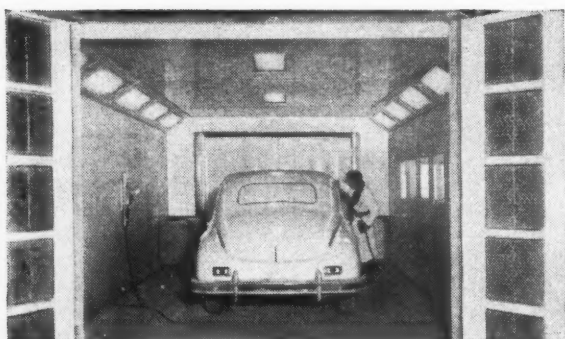
Chilton's MOTOR AGE, AUGUST, 1954



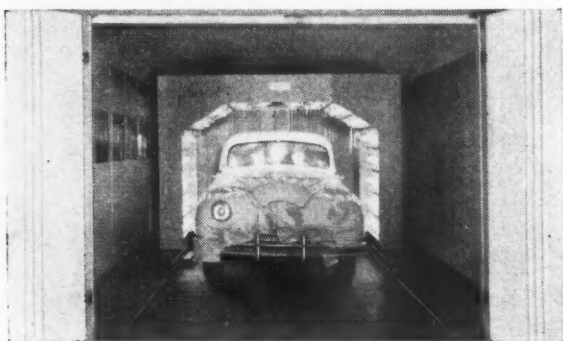


Prospects sell themselves when they see gleaming finishes being sprayed and dried in DeVilbiss combination booth and oven.

Smith Chevrolet ups paint labor sales 35%!



Above—In the booth, scientific lighting and good ventilation help assure a factory-like job. **Below**—This DeVilbiss Traveling Infrared Oven dries enamel jobs in 45 minutes to an hour.



New DeVilbiss paint shop handles complete spray jobs faster, more profitably!

In July, 1953, the A. B. Smith Chevrolet Company of Portland, Oregon, installed a new DeVilbiss paint shop to help them handle the ever-increasing volume of bump-and-paint business.

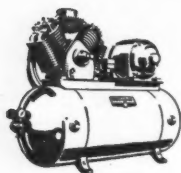
Now, with a DeVilbiss Showroom Spray Booth and a DeVilbiss Traveling Infrared Oven, they can handle five complete paint jobs a day. Their operation is so efficient that economy paint jobs are turned out profitably for \$49.00! De luxe jobs run \$85 and \$90. Total labor sales in the paint shop have jumped 35% — and Don Hartung, body shop superintendent, is looking forward to an even greater increase!

How you benefit

(1) A DeVilbiss paint shop enables you to handle more business. (2) You make a higher profit on each job. Let your DeVilbiss jobber survey your operation and tell you exactly what equipment will do the best job for you. Give him a call today!

THE DEVILBISS COMPANY, Toledo 1, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England



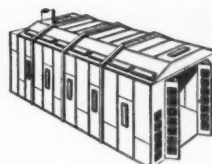
Air Compressors



Spray Guns



Hose and Connections



Spray Booths

Branch Offices and Distributors in Principal Cities Throughout the United States, Canada and the World

FOR BETTER SERVICE, BUY

DEVILBISS



New Products Continued from Page 120

charge on melting serves to actuate the thermostat valve, allowing water to circulate through the radiator for cooling.

407. Tool Protector

Silicote Corp.: This maker claims that "Tool Saver" is a cloth designed to spare tools from rust and corrosion. The flannel cloth is saturated with silicones, which are resistant against rust, moisture, perspiration and salt corrosion, according to the company. One wipe with the cloth, it is further stated, protects tools for a full storage season and lasts for days on tools in frequent use.

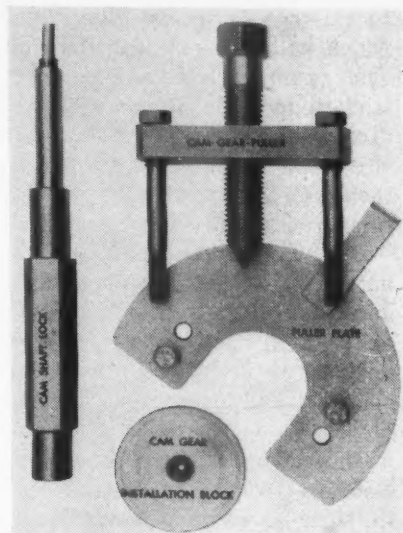
408. Parts Cleaner

Lempco Products, Inc.: Operating in the same principle employed in industrial wet pressure blast equipment, the Hydra-Blast removes grease, carbon, and oil, from parts. It is claimed that a satin finish is obtained without stock removal, over-etching, or abrasive impregnation while

drives for the agitator and blower exhaust, sealed agitator shaft, and sealed fluorescent lighting. For normal use a 3 HP compressor provides sufficient air for good operation.

409. Camshaft Gear Kit

Nat'l. Machine Works: Operating on a new principle, which protects the engine camshaft and



gear, is this camshaft gear service kit. The four piece kit is designed for removing and replacing the engine camshaft gear in Chevrolet 1937-54 engines and General Motors 1940-54 truck engines (gasoline only). Usual installation time is cut by 75% because it is unnecessary to dismantle the engine, says the maker.

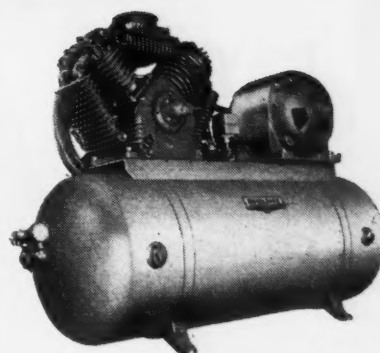
In addition it is claimed that the welch plug in the rear of the engine block is not disturbed by the operation.

410. Work Light

Ozilam Co.: The Brow-Lite slips on to the forehead like a pair of glasses and throws a beam of light directly on the "point of interest", this maker claims.

Used wherever a focused light is needed it leaves both hands free to work.

The Brow-Lite is plastic and has standard batteries.



22.6% more air per power dollar

It's a fact! By actual test, DeVilbiss Air Compressors deliver as much as 22.6% more air per power dollar than the general run of compressors. Many times, you can pay for a new DeVilbiss Air Compressor out of power savings alone!

Every DeVilbiss Air Compressor, from 1/2 to 15 hp. offers you:

- Dependable DeVilbiss Compressor Unit
- Check Valve Manifold
- Automatic Pressure Switch
- Quality Electric Motor or Gas Engine
- A.S.M.E. Approved Tank
- Outlet Manifold
- Quiet Efficiency Drive

For a complete checkup on your compressor needs, contact your local DeVilbiss jobber. There's no obligation.

THE DEVILBISS COMPANY Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England
Branch Offices in Principal Cities

FOR BETTER SERVICE, BUY

DEVILBISS



hand work of all kinds may be eliminated.

Features are said to galvanized iron cabinet, separate motor

BAY-LIFT

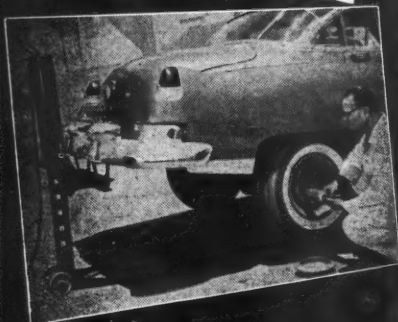
puts you in
proper position
for profits



PORTABLE, PNEUMATIC — Goes anywhere an air hose will reach!
Raises either end 50" in 10 seconds.
Holds at any position. Automatic safety lock. Two stage control valve. Rugged, dependable, trouble-free.

Bay Bumper Jack

EASY • SAFE • FAST
drops wheels clear
of deep fenders



- Air operated • Steel wheels
- Automatic safety lock
- Heavy duty axle
- 3000 lb. capacity
- Stops at any ht. to 32"

BAY MANUFACTURING COMPANY
BOX 608, HARBOR CITY, CALIF.

Warehouses in Boston & Philadelphia
Overseas Div. 276 W. 43rd St.
New York 36, N.Y.



• Free demonstration in your own shop.

Flocking

Continued from Page 57

not so vulnerable.

Areas such as the dash panel, which may require flocking to reduce annoying windshield glare, can be masked at appropriate boundaries, coated with adhesive and then flocked. Since the dash panel receives relatively little abrasion, the flocked area should last indefinitely. The plush appearance makes flocking of a part like this an especially gratifying job.

Even head linings can be flocked. In this case a special glue is used which will not soak into the cloth. The result is a beautiful velvety surface in place of the previously dirty piece of cloth. A luxurious effect can be obtained by flocking the dash panel, head lining and rear shelf with the same material.

Door panels can be flocked too, but they take considerable abrasion and cannot stand up as well as the above mentioned parts. However, flock can be "refinished," so a worn spot is easily reflocked if necessary.

The value of flocking on used cars is evidenced by the fact that, in some cases, car factories are recommending this process as a part of their used car reconditioning program.

The cost is low. A flock gun usually costs under twenty dollars. The only materials necessary are the glue and flocking material, neither of which involves much expense. The operation does not take a lot of time, either, as a glove compartment, dash panel, kick panels and rear window shelf will take no more than 2 hours to re-finish and the price for such a job would be 15 to 20 dollars.

The materials involved for a job like this would cost about 3 dollars, which leaves a healthy margin of profit. One of the main consumers of time in flocking is the cleaning up of the overspray with a vacuum cleaner. This is reused, so it does not go to waste.

Body shops which strive to give their customers the most service should give careful consideration to flocking, as it is a natural, and worthwhile, addition to any body shop operation.

VIXEN files take a big bite



The forward slant or undercut of Vixen's Milled Curved Teeth gives this file a definite cutting action like miniature milling cutters. Long filings curl from these keen teeth. Deep gullets prevent clogging or loading even on the softest materials. Vixen cuts faster, freer, smoother. It's the original and still the best.

HELLER BROTHERS CO.
America's Oldest File Manufacturer
NEWCOMERTOWN, OHIO

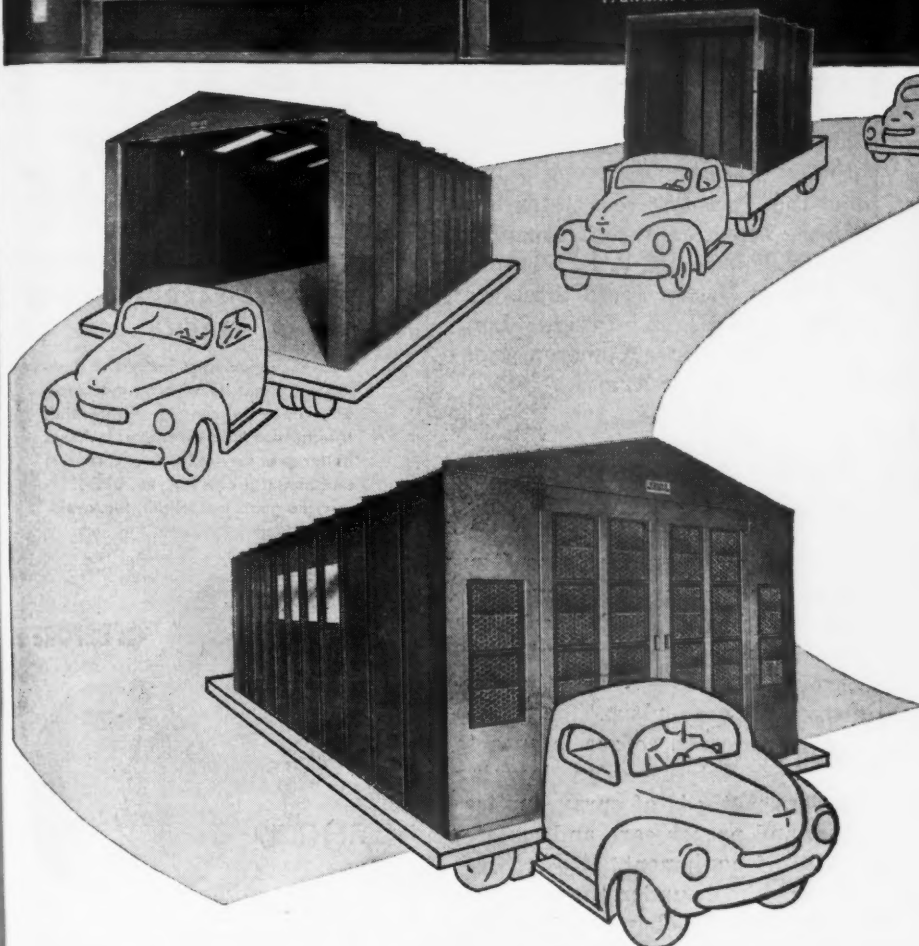


Your Heller Distributor Can
Supply All Your File Needs

**ONLY HELLER
MAKES THE VIXEN**

VIXEN, NUCUT and
American-Swiss
are made only by





Heavy machinery shears, punches and forms the sheet steel.



Assembly of spray booths proceeds on a production line basis.



All parts are painted in latest conveyorized spray booth.



Ample loading docks and mechanical handling equipment speeds delivery.

Streamlined production brings you **BETTER SPRAY BOOTHS** at a real saving!

Today, you can have the most efficient spray booths on the market at a price no more than ordinary equipment...and sometimes for even less. This is possible because Binks engineers have improved and *standardized* the design of spray booths. Standard parts are assembled to provide high efficiency booths that will meet any requirements. These parts are mass produced in Binks' new Franklin Park Plant...quickly, precisely and economically. And that's why you can buy BINKS approved Spray Booths now...and actually save money.

Write today

for our NEW 956 Catalog.

Binks

EVERYTHING FOR
SPRAY PAINTING

It will tell you all about the many models of spray booths available... will help you pick the right equipment for your use.

Binks Manufacturing Company
3124-34 West Carroll, Chicago 12, Ill.

Send me a copy of your NEW 956 Catalog. I am interested in your complete line of standard Spray Painting Booths.

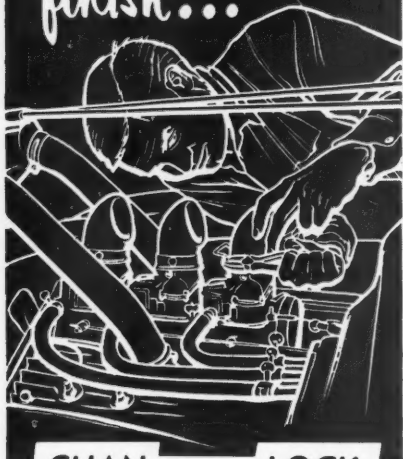
NAME

COMPANY

ADDRESS

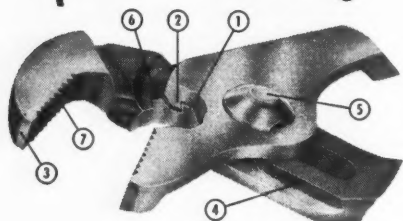
CITY ZONE STATE

From the start of
the job to the
finish...



CHAN NEL LOCK

pliers are busy



here's why

1. Interlocking principle prevents slipping under any load. 2. New type wide base lugs cannot shear. 3. New nose design for gripping small objects. 4. Patented design of tension edge eliminates stress concentration at channels. 5. Interlocking design minimizes stress on joint bolt. 6. Precision machined interlocking surfaces result in perfect fit, distributing pressure evenly. 7. "Rite Angle" teeth guarantee maximum bite and minimum wear.

Look for the Channellock line when you're shopping for hand tools. Channellock pliers offer features that you can't get with other makes. And when you buy a Channellock plier, ask to see the full line—you'll find a style and model to do any job better.



CHAN NEL LOCK

THE PLIER DESIGN THAT OBSOLETE ALL OTHERS
CHAMPION D'ARMENT TOOL CO. • MEADVILLE, PA.

Gilchrist and Noble Elected to Board

The general election which took place at the headquarters of the State Board of Independent Garage Owners of Calif., Inc., resulted in the appearance of two new names on the board. Jack Gilchrist, Los Angeles, and Kenneth Noble of E. Los Angeles. Mr. Gilchrist took over the secretary's post for a three year term. Mr. Noble will fill out the remaining year in the term of the directorship left vacant by the resignation of R. F. Wiggin.

Others elected for a three-year term were G. E. Druehl, Long Beach, and Bruce Cameron, treasurer, Bellflower-Artesa.

Binks School Set For Fall Courses

The Binks Manufacturing Company's free school of spray painting will begin its Fall schedule of courses on September 13 through September 17 at the company's Chicago plant.

The one-week course is open to all those interested in learning modern methods of spray application, and proper care and maintenance of equipment.

The school, under the direction of William Beacham, paint chemist, is conducted in specially equipped classrooms. First-hand experience in the construction and operation of spray equipment is supplemented with modern audio-visual training aids.



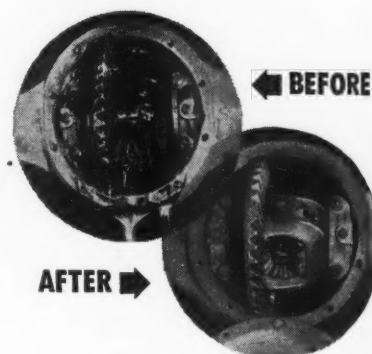
"GOOD CITIZEN AWARD" is presented to Clarence P. Bowers (2nd from R) president of the Bowers Battery and Spark Plug Co., by members of the Sons of Union Veterans of the Civil War in Reading, Pa. (L to R) Camp Commander Edward Schnable makes the award while Capt. Howard Still, Sr. and C. LeRoy Stoudt look on.



with **DEE-TEE**

**DIFFERENTIAL-TRANSMISSION-
OVERDRIVE VAPOR-CLEANING
SERVICE**

DEE-TEE* eliminates ineffective flushing and hand cleaning by automatically vapor-degreasing differential, transmission and overdrive. It means better gear service for your customers and bigger profits for you. DEE-TEE*-serviced gears last longer, too, avoiding costly major repairs.



Easy to use, DEE-TEE* automatically degreases gears in only nine minutes, then shuts itself off. Requires no attendant while in use.

With conventional draining, tests show that over 20% of old lube remains in gear housings. DEE-TEE* completely removes all old lube; leaves the gears clean and dry. This means you sell more lube oil with each servicing than ever before.

Take a tip from over 20,000 DEE-TEE* users and major automobile and oil companies: ask your jobber TODAY about new, safe DEE-TEE* servicing.

NOW!... Free Maintenance Guaranteed



made only by **CURRIER**
Company
P. O. BOX 126 • OAKLAND 4, CALIF.

BOWER



tapered roller bearings for quality and service!

It's BOWER for quality in tapered roller bearings. Exclusive Spher-O-Honed features—honed raceways, with contours matching roll ends . . . high flange . . . large oil groove. You get positive lubrication and smooth, quiet, dependable performance.

Federal-Mogul Service brings you Bower manufacturing quality—through your Federal-Mogul jobber. Bower and Federal-Mogul . . . two great names in bearings . . . are your double assurance of dependability!

FEDERAL-MOGUL SERVICE

Division Federal-Mogul Corporation

DETROIT 13, MICHIGAN



Our 75 branches, in principal cities, provide your jobber with Federal-Mogul service on Bower roller bearings.

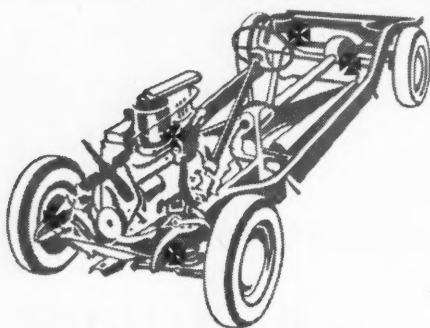


Look at all the places
you can use
instant lighting

BERNZ O-MATIC®

TORCHES

with disposable fuel cylinders!



- ✱ loosening mufflers and tail pipes
- ✱ freeing frozen bolts and nuts
- ✱ loosening king pins
- ✱ loosening springs
- ✱ ignition repairs

These are only a few of the places where you can use the BERNZ-O-MATIC Torch. It is also excellent for radiator repairs, battery repairs, burning paint, melting lead and babbitt and many other uses.

Best of All

IT'S SO EASY TO USE:

1. Weighs less than three pounds fully loaded.
2. Has disposable fuel cylinder that can be removed at any time, and contains enough fuel for 15 hrs. burning time.
3. Burns with 2300 degrees heat.
4. Is Underwriters' Laboratories Approved.
5. Retail for only \$6.95 complete.
6. Replacement cylinders retail for only \$1.95 each.
7. Soldering tips, flame spreaders and stands are available as accessories.



New catalog sheet gives details. Send for your copy today. Simply mail the coupon.

OTTO BERNZ CO., INC. MA

280 Lyell Avenue, Rochester, N. Y.

Please send me your new catalog sheet on the BERNZ-O-MATIC Master Torch.

Name.....
Company.....
Address.....
City..... Zone..... State.....

Power Steering

Continued from Page 47

inspect the cover gasket and renew if necessary. Reinstall the reservoir cover or dipstick.

Some manufacturers do not recommend changing the filter element in the power steering reservoir unless the element is damaged, while other manufacturers specify changing it every 25,000 miles. Therefore, whenever it becomes necessary to change the filter element, the system should be drained, a new element installed and fresh oil added to bring level up to proper capacity, which is approximately 3 to 3½ pints.



Note on the gear type: Discolored or thick oil in the power steering reservoir usually indicates a defective seal which allows steering gear lubricant to seep into the power steering oil.

Lasco
MOUNTAIN MASTER
BRAKE LINING
America's Finest!

From Hollywood to Manhattan—Demanded by Fine Car, Bus and Heavy Transportation Owners. Get the BEST for a Few Cents More. Cut Costs—Prevent Accidents—Save Lives! Dealer inquiries are invited. Write or wire. **LASCO BRAKE PRODUCTS CORP.** MEMPHIS 3, TENN. OAKLAND 7, CALIF.

**SURE BEATS
DRAWERS FOR
STORING TOOLS!**



...and doubles the capacity, too!

**NEW
HUOT
TULDEX**

The TULDEX is an entirely new idea for protecting and locating tools. It was designed particularly for the master mechanic who appreciates and wants the best of care and protection for his equipment. Saves those many hours that are lost hunting for a misplaced tool.

Six tool holding panels, 12" x 20", are made of tempered, perforated hardboard and move on separate tracks with geared, self-lubricating nylon bearings. Doors swing completely out of the way when open. Panels and doors together have more than 24 square feet of tool storage area—twice as much as most tool chests! Top and bottom locks are built-in.

The cabinet of heavy steel is finished in attractive blue and grey baked enamel and is grease proof. The big drawer is just right for power tools or bulky items. You can place the Tuldex on a bench, hang it on a wall or mount it on top of a portable Huot Porta-Cab. Overall size: 29" x 26" x 13¾".

Ask your jobber,
or write for bulletin.

Made by America's leading manufacturer of
"Modern tool storage systems for modern tools."

HUOT

HUOT MANUFACTURING CO.

585 No. Wheeler St., St. Paul 4, Minn.

Chilton's MOTOR AGE, AUGUST, 1954

NEW

NON-CORROSIVE!

EASY ON—EASY OFF!

CAN'T FREEZE OR LOCK!

BETTER ELECTRICAL CONNECTION!

U.S. patents allowed and applied for. Canadian patent pending.

Jiffy

O. H. THOMAS
COMPANY

2000 East Third Street
Williamsport, Pennsylvania

Solderless Terminal Connector

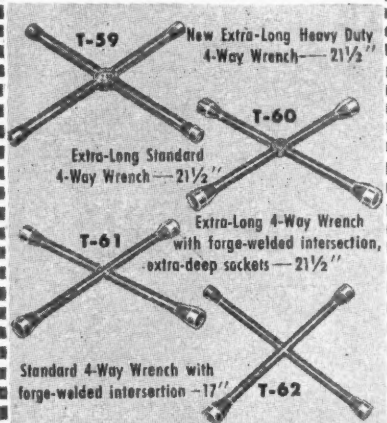
Save yourself time, labor and money . . . offer your customers longer battery life—use the new Jiffy solderless connectors! Unique construction and non-corrosive, lead-antimony alloy make Jiffys easy to install and remove . . . eliminates hammering and prying that shortens battery life. Dependable electrical connections.

Satisfy your customers and yourself—use Jiffy Connectors. Write or phone your jobber today or write direct for complete details.

**GUARANTEED FOR LIFE
AGAINST BREAKAGE!**

Quality Passenger Rim Wrenches by **Ken-TOOL**

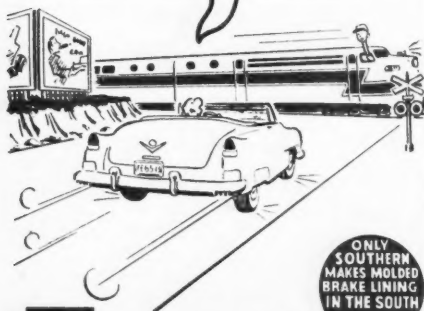
Preferred by tire repair men everywhere for their proven superiority and long life. Insist on these stronger, tougher, longer-lasting wrenches—hot-forged from chrome nickel alloy steel, with two 3/4" sockets for double life!



SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.



QUIT WORRYING ENGINEER,
I CAN STOP!
MY BRAKES ARE LINED WITH
**SOUTHERN
FIBER BLOCK**



SOUTHERN
FRICTION MATERIALS CO.—CHARLOTTE, N.C.

Buy Bonds

Calendar of Coming Events

Dealers Conventions

- August—Automobile Dealers Assoc. of West Virginia, Greenbriar Hotel, White Sulphur Springs.
- Sept. 10-11 — Colorado Automobile Dealers Assoc., Broadmoor Hotel, Colorado Springs.
- Sept. 10-12—Maine Automobile Dealers Assoc. Convention, Samoset Hotel, Rockland.
- Sept. 12-13—South Dakota Automobile Dealers Association, Alex Johnson Hotel, Rapid City, S. Dak.
- Sept. 16-18—New Mexico Automotive Dealers Assn. Convention, Hotel Hilton, Albuquerque.
- Sept. 17—Kansas Automobile Dealers Association, Broadview Hotel, Wichita.
- Sept. 19-20 — Automobile Dealers Assoc. of North Dakota Convention, Fargo.
- Sept. 19-22—New York State Automobile Dealers, Inc., Saranac Inn.
- Sept. 20-21 — Minnesota Automobile Dealers Assoc. Convention, Nicollet Hotel, Minneapolis.
- Sept. 20-21 — Wisconsin Automotive Trades Assoc. Convention, Hotel Schroeder, Milwaukee.
- Sept. 23-24—New Jersey Automotive Trade Assoc. Convention, Atlantic City.
- Sept. 28-29 — New Hampshire Automobile Dealers Association, Wentworth-by-the-Sea Hotel, Newcastle, N. H.
- Sept. 28-29 — Automobile Dealers Assn. of Alabama, Inc., Convention, Buena Vista Hotel, Biloxi, Miss.
- Oct. 3-4—Oklahoma Automobile Dealers Association Convention, Skirvin Hotel, Oklahoma City.
- Oct. 3-5 — Automobile Dealers Assoc. of Alabama Convention, Biloxi, Miss.
- Oct. 8-9 — Pennsylvania Automotive Assoc. Convention, Haddon Hall, Atlantic City, N. J.
- Oct. 10-12 — Texas Automotive Dealers Assoc. Convention, Gunter Hotel, San Antonio.
- Oct. 10-12 — Mississippi Automobile Dealers Association, Buena Vista Hotel, Biloxi, Miss.
- Oct. 17-18 — Georgia Automobile Dealers Assoc. Convention, General Oglethorpe Hotel, Savannah.
- Oct. 17-19—Arizona Automobile Dealers Association, Westward Ho Hotel, Phoenix.
- Oct. 17-19 — Tennessee Automotive Assoc. Convention, Peabody Hotel, Memphis.
- Oct. 21-23—New Mexico Automobile Show, Albuquerque.
- Oct. 23-25 — Arkansas Automobile Dealers Assoc. Convention, Hotel Marion, Little Rock.
- Oct. 24-26—Florida Automobile Dealers Assoc. Convention, Hotel George Washington, Jacksonville.
- Oct. 26 — Connecticut Automotive Trade Assoc. Convention, Hartford.
- Oct. 31-Nov. 1—10th Annual Convention, Texas Independent Automobile Dealers Association, Hilton Hotel, Fort Worth.

- Nov. 7-9 — Ohio Automobile Dealers Assoc. Convention, Hotel Mayflower, Akron.
- Nov. 7-9—Automotive Trade Association of Virginia, John Marshall Hotel, Richmond.
- Nov. 7-9—Kentucky Automobile Dealers Assoc. Convention, Kentucky Hotel, Louisville.
- Nov. 14-16—National Used Car Dealers Association Convention, Empress Hotel, Miami Beach, Fla.
- Nov. 20 — Utah Automobile Dealers Assn. Convention, Newhouse Hotel, Salt Lake City.
- Dec. 2-4—Montana Automobile Dealers Association, Florence Hotel, Missoula, Montana.

Automobile Shows

- Aug. 16-18 — Society of Automotive Engineers (National West Coast Meeting) Los Angeles.
- Sept. 20-22—Truck, Body Equipment Association, Inc., Hotel Statler, Buffalo.
- Sept. 23-25 — Automotive Parts Rebuilders Association Convention and Parts Show, Morrison Hotel, Chicago.
- Oct. 25-27 — Nat'l Assoc. of Independent Tire Dealers, Sherman Hotel, Chicago.
- Dec. 6-7 — National Standard Parts Assoc., Hotel Sherman, Chicago.
- Dec. 8-Jan. 1, 1955—Automotive Service Industries Show, Navy Pier, Chicago.

General

- Oct. 7—Automobile Old Timers Annual Meeting and Dinner, Hotel Astor, N. Y. C.
- Oct. 10-16—Oil Progress Week.



You can place your confidence in the same source of supply used by leading car factories and industrial and heavy-duty engine manufacturers.

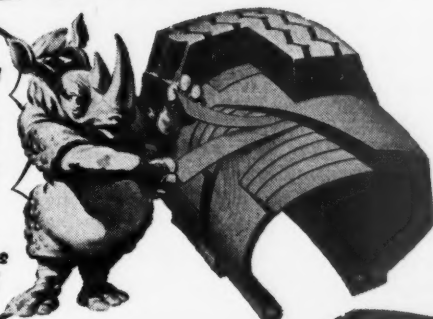
FELT PRODUCTS MFG. CO.
1504-14 Carroll Ave., Chicago 7, Ill.

TOUGH TIRES AND TOUGH ADVERTISING

make Armstrongs "the champ" at knocking
down sales resistance

Armstrong Tires
WEAR LONGER
because they're
MADE STRONGER!

Only Armstrong
gives you
**DOUBLE
INSERT
PLIES**
for extra miles
and recaps!



Yet Armstrong's "Bonus Value" costs no more!

There's a reason Armstrongs give you so many more miles for your money! For Armstrongs are made stronger - with 2 exclusive insert plies in addition to the breaker strip. This extra strength helps hold the carcass tight - halts tire growth - eliminates mileage-consuming "stretch". And, by guarding against heat and impact breaks, it makes Armstrongs up to 71% more recappable! Yes, Armstrongs wear longer - yet cost no more! Good reason to get them today!

Remember: You Get Double Insert Plies Only in

**ARMSTRONG
TRUCK TIRES**

WEST HAVEN, CONN., NORWALK, CONN., NATCHEZ, MISS., DES MOINES, IOWA, SAN FRANCISCO, CALIF.



Now "in your corner" to help you sell -
HEAVIEST ADVERTISING EVER!

Here's a two-fisted sales-punch that's sure to bring you new profits! First, the "toughest tires on the road" . . . the *only* tires with double insert plies for extra safety, wear, mileage. Second, the toughest advertising in tire history! Hitting customers month after month in leading truck magazines. For *more* sales . . . with *less* resistance . . . stock Armstrong Rhino-Flex Truck Tires today!

ARMSTRONG
RHINO-FLEX
TRUCK TIRES

WEST HAVEN, CONN., NORWALK, CONN., NATCHEZ, MISS., DES MOINES, IOWA, SAN FRANCISCO, CALIF.

Chilton's MOTOR AGE, AUGUST, 1954



Be a big winner!

YOU are eligible for the coveted Brand Name Retailer-of-the-Year Plaque or one of four Certificates of Distinction to be awarded in your retailing field next Brand Names Day.

Win one of these important awards by promoting brand names all through 1954! Brand names mean business. Thousands—or millions—of dollars worth of national advertising, paid for by the manufacturers, pre-sell your customers and cut selling time. You get faster turnover, because known brands outsell unknowns by seven or eight to one in most categories.

Steady demand and repeat sales give you fewer markdowns. Because brand name manufacturers pre-test their products, and assume responsibility for them, you have fewer adjustment worries. Reputable brands add prestige to your store, and bring you advertising help that cuts your costs and adds to the effectiveness of your advertising.

These are the ways you win, this year, by promoting brand names. When you win a Brand Name Retailer-of-the-Year Award, your winnings increase! Exciting publicity in your local newspapers and trade papers brings you prestige among your customers and your suppliers, and adds to store traffic.

Be a big winner! Send the coupon for your Brand Name Retailer-of-the-Year entry blank today! There's no cost, no obligation, no entry fee. And you get the idea-packed merchandising kit, "Brand Names Mean Business," free!

Brand Names Foundation INCORPORATED

37 West 57th Street, New York 19, N. Y.

Please send me an entry form for the 1954 Brand Name Retailer-of-the-Year competition, and a copy of the free kit, "Brand Names Mean Business."

Firm Name _____

Type of Firm _____

Executive _____

Title _____

Street _____

City _____ Zone _____ State _____

FINISHING TOUCH TO A

Classy Display



When you're looking for quality paint products, you can rely on the jobber who features the Arco line, and displays the Arco emblem (right side up, of course).

Handling Arco refinish products marks him as a man eager to serve you with the very finest . . . proud to offer Arco products for your *every* refinishing need, from spot putty to color machines. You can depend on these Arco products, and on the fine related lines he carries.

Look for the colorful Arco emblem on trucks and store fronts. It marks a reliable automotive jobber, handling top-quality refinishing products. Call him today.



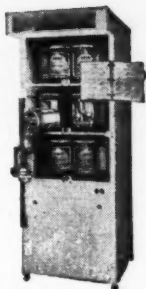
THE ARCO COMPANY

7301 Bessemer Avenue • Cleveland 27, Ohio
5898 Central Avenue • Los Angeles 1, Calif.

QUALITY ARCO REFINISH PRODUCTS MADE BY THE ORIGINATORS OF COLOR MACHINE MERCHANDISING

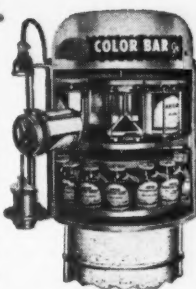
COLOR BAR®

21 gals. of base colors. Designed for high volume refinish business. The "king" of all color machines . . . fits in space the size of household refrigerator, 29 inches square.



COLOR BAR, JR.

8 gals. and 13 qts. of base colors. Built for the medium sized shop . . . equipped with practically all the features of the famous COLOR BAR.® The latest model in the Arco line, COLOR BAR, JR. offers high volume output. Mounted on drum or bench top.



COLOR CADDY

4 gals. and 17 qts. of base colors. Ideal for the low or medium volume body shop where accurate matching and widest range of colors are essential. Excellent value . . . amazingly low investment with high profit possibilities.





"6,000 employees . . ."

A. W. STEUDEL

*President
Sherwin-Williams Company*

"Naturally, we of Sherwin-Williams give complete endorsement to the Payroll Savings Plan. But we feel that mere approval of a national thrift movement that contributes so much to the personal security of our employees and the economic stability of our country is not enough. In our continuing effort to build employee participation in our Plan, we utilize the personal contacts and enthusiasm of our enrolled Payroll Savers. A recent person-to-person canvass by our employees put a Payroll Savings application blank in the hands of every man and woman in our plants and offices. The result, nearly 6,000 serious savers were added to our Payroll Savings Plan."

The personal interest of executives like Mr. Steudel, and the systematic bond purchases of more than 8,000,000 enrolled Payroll Savers are reflected in the following figures:

- In March, 1954, purchases of U.S. Savings Bonds, Series E and H, by *individuals* reached \$474 million, highest March figure in 9 years—a gain of 20% over March, 1953.
- Purchases of E and H Bonds, by *individuals* during the first quarter of 1954, totaled \$1,380 million—the highest for any quarter since 1945.
- The *cash value* of Series E and H Bonds held by *individuals* at the end of March, 1954, was \$37 billion, 175 million—the highest in the thirteen year history of the Savings Bond program.
- Payroll Savers are serious savers: over 75% of the

amount of Series E Bonds that matured since May, 1951—almost \$9 billion—is still being held by individuals under the Treasury's 10 year optional automatic extension plan.

- For the third straight month of 1954, sales of E and H Bonds exceeded maturities and redemptions. The sales excess amounted to \$242 million on March 31—the highest first quarter net since 1950.

If employee participation in your Payroll Savings Plan is less than 50%—or if your company does not have a Payroll Savings Plan, get in touch with Savings Bonds Division, U.S. Treasury Department, Washington, D.C. Your State Director, U.S. Treasury Department, will be glad to help you install a Plan and build employee participation.

The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

MOTOR AGE



Fram fantoms strike again!



\$500 CASH
when you catch the
Fram Phantom!

Ask every motorist
"How's Your Oil Filter?"

Increase Cartridge
and Oil Sales

Get more details on the sensational FRAM Phantom Drivers
from your distributor—and stock up plenty of FRAM!

Once again, the fabulous FRAM Phantom Drivers are coming your way with free cash! You'll win \$5.00 if you suggest an oil, air, fuel or water filter replacement or filter installation to the FRAM Phantom Driver.

You don't have to be a FRAM Dealer to win, but if you stock the complete FRAM line you'll cash in on profits as well as prizes! Every time you check oil, air, fuel or water, mention a new cartridge or filter installation. If it's a FRAM Phantom Car you win \$5.00—if it's not a Phantom, chances are you've started a profitable sale anyway! You're certain of winning either way.

You can't tell a FRAM Phantom Driver from any other motorist . . . so be sure to suggest a cartridge change to *every* customer —you can't lose!

FRAM CORPORATION, Providence 16, R. I.
Fram Canada Ltd., Stratford, Ont.



FRAM
OIL • AIR • FUEL • WATER
FILTERS

Coming
**NEXT MONTH—
BIG FRAM
BLITZ**
for 2nd Half!

reprinted
from

POPULAR MECHANICS

June, 1954

IN SOME SITUATIONS
Knowing the name
can mean life or death...

Of all brake failures, the most dangerous is the sudden kind some poorly-made brake linings are prone to. And when such a failure occurs to a person who *doesn't even know* what kind of lining he has—and is totally unprepared for failure—it can mean *the end*, as surely as any poison taken blindly from a medicine chest.

That is why it pays to make *sure* you know the brake lining that is being installed in your car by name and grade.



THERE IS ONE LINING YOU CAN MAKE SURE OF



GRIZZLY
BRAKE LINING
REG. U. S. PAT. OFF.

When you buy Grizzly brake linings you know exactly what you're getting. We at Grizzly have made millions of sets of brake linings over the past forty-four years, and we are proud of the high record of safety, performance and long service established by Grizzly linings. We want our product recognized on sight! We don't like having other brake linings sold as Grizzly or "as good as Grizzly."

Also, we make and recommend two distinct kinds of linings for different service demands. One, named "Syncro," is an excellent lining engineered for standard-duty use. The other, named "Silvertip," is a heavy-duty lining, for high mileage, multi-stop service in cars with power brakes and automatic transmissions and in all trucks, trailers, and truck tractors. We want you to know for sure which of these brake linings you buy when you buy Grizzly.

THEREFORE, GRIZZLY has taken two important steps: (1) carefully selected its distributors, to make "Grizzly Authorized Brake Shoe Exchange" mean *honesty and reliability* that you can trust your life to, and (2) provided its authorized exchanges with Grizzly trade-marking equipment to brand the *outer side* of each lining with Grizzly's name and the grade of the lining, after the lining is bonded or riveted to the shoe.

When your brake service man gets his relined shoes from a Grizzly Authorized Exchange, both you and your brake service man can take one look and know you are getting what you pay for and the safety you want. Grizzly Manufacturing Division, Paulding, Ohio.

MAREMONT AND ONLY MAREMONT HAS IT!

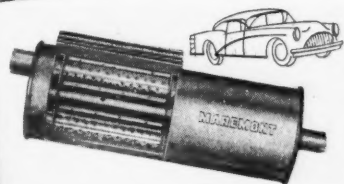
The right muffler for every vehicle-

Yes... the only COMPLETE muffler line on the market is Maremont. Only Maremont furnishes under ONE famous name every exhaust system part any vehicle owner wants. And each part is the right part for every vehicle, every engine.

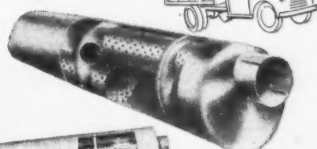
Combine this fact with Maremont's top quality and reputation *all across the board* - in passenger car, truck, Hollywood-type, farm tractor mufflers... dual exhaust sets... tail and exhaust pipes... fittings and accessories—and you see that Maremont is the line for you. Maremont gives you full market coverage, full customer satisfaction... makes ordering, stock-

ing, display and installation easier. Maremont gives you everything you need... all from ONE source.

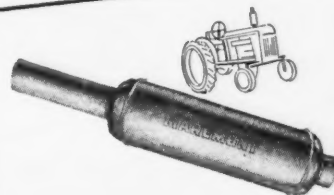
You'll like Maremont's right profit, too, and Maremont's "Sell 'em at the Lift" plan that keeps stock moving fast. You'll like the "Tap and Tell" sales approach that shows customers why Maremont's asbestos wrapped mufflers quiet highest-powered engines to a whisper... the new "hush" performing TD Truck Mufflers with many times longer life... the exclusive, efficient design that distinguishes all Maremont mufflers. *You'll like Maremont*... the line you can sell to every vehicle owner!



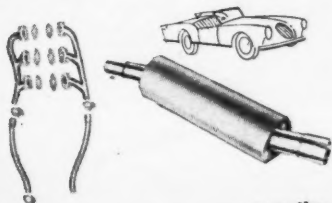
passenger car mufflers...
Double-wrap... high compression
straight thru... multi-ribbed...
asbestos wrapped... round or oval
mufflers... for all vehicles.



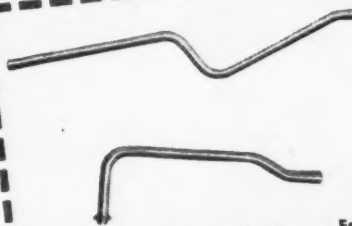
truck mufflers... For all standard
or heavy duty trucks. New TD muffler
has internal parts of aluminized
steel for 2 to 3 times longer life...
is super quiet.



farm tractor mufflers... Indi-
vidually designed for specific makes
and models... easily installed...
laboratory tested... heavy duty
construction... quiet performing.



**dual exhaust sets and Holly-
wood-type mufflers...** Left bank,
header... left tail pipe kits—for
power... better mileage. Holly-
wood-type mufflers for mellow tone.



tail and exhaust pipes... For
all passenger cars and trucks, top
quality... long lasting. Also, utility
bendable pipes... Maremont sec-
tional "Time Saver" tail pipes.



exhaust system accessories...
For all trucks, tractors and cars...
muffler shrouds, hangers, spouts,
flexible pipes, tubing, reducing
bushings, elbows, clamps, etc.

MAREMONT MUFFLERS

The right design... for every engine!

MAREMONT AUTOMOTIVE PRODUCTS, INC. Chicago 8, Illinois



LOOK to CHAMP-ITEMS

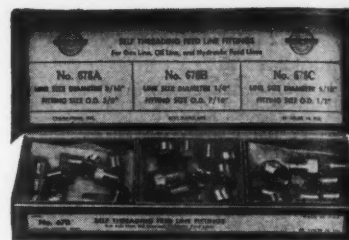
for the latest in Trouble Shooters

For 25 years, Champ-Items has developed one item after another to help the service trade cure car ailments and satisfy car owners. More than 300 parts are now in the Champ-Items line. If you have a problem, you'll find the answer in a Champ-Items. Send for a copy of our Silver Anniversary Catalog — filled with service ideas — real Time Savers — Money Makers for you!



No. 673 Spring Leaf Silencing Pads for Ford, Mercury and other makes. Made of a very fine grade of Solid Woven Webbing (Wax Impregnated). Stops squeaks — lasts longer — easier riding. **List 20¢ each.**

No. 678 Self-Threading Feed Line Assortment for Gas Line, Oil Line and Hydraulic Feed Lines. This fitting is made of hardened steel and will cut its own threads, while most standard fittings are made of brass and are easy to strip and batter up threads. This Champ-Items Assortment has 36 fittings of 12 each of three sizes and provides a real efficient means of repair and eliminates a costly labor job. **List 20¢ each.**



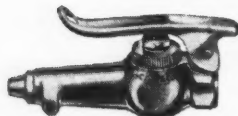
ORDER FROM
YOUR JOBBER



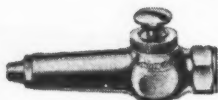
CHAMP-ITEMS, INC. 6197 Maple Ave., St. Louis 14, Mo.



You can do many jobs faster, easier and better with Schrader Airline Fittings. Got these quality blow guns?



#8785 Lever type
Blow Gun



#7184 Button-type
Blow Gun

Schrader
REG. U. S. PAT. OFF.

See our ad

on page 143

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated

BROOKLYN 38, N. Y.

TELLS EXACT BATTERY CONDITION AT A GLANCE!

NEW Auto-Test BATTERY ANALYZER & VOLTAGE TESTER

FULLY GUARANTEED
FOR 90 DAYS

CHECKS BOTH
6 AND 12-VOLT
SYSTEMS

Most accurate tester ever built! Tests Open Circuit Voltage, Cell Load, Voltage Regulator, High-Resistance Circuit. Fast, clean—no acid damage. Reveals faulty cables and connections—helps sell batteries and recharge jobs. Exclusive wide-spread dial permits readings as close as 1/100 volt.

• Fast . . . Clean . . . No Acid Damage • Tests new Batteries in Stock • Exclusive "E-Z-Read" Dial • Unbreakable Hard Rubber Case • Retracting Spiral-Coiled Cords

Chrome-Plated HANGER CLIP
permits hanging on lowered window so customer can see.

ORDER FROM YOUR JOBBER—OR WRITE DIRECT FOR FULL DETAILS

Auto-Test
Incorporated

600 SOUTH MICHIGAN AVENUE
CHICAGO 5, ILLINOIS

This NEW SQUEEGEE is yours...

with **TRICO'S SOLVENT SPECIAL**

To acquaint additional dealers with the repeat profits that can be made with Trico Windshield Washer solvent, Trico Jobbers for a limited period are offering this "special."

Buy 3 display cartons of Trico Solvent (each contains 6 bottles) and this new E-Z-CLEAN Wash 'n' Squeegee is yours without extra charge. It speeds up and improves windshield cleaning service. (Make your own squeegee solvent by mixing a bottle of Trico solvent in 3 gallons of water; it softens bugs, dissolves traffic film).

Trico Solvent is an all-year seller. 18 million Trico Windshield Washers provide a big market for it.

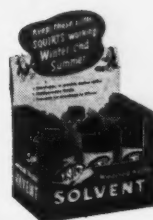


Windshield Washers

SEND 10 Cents TRICO UNIVERSAL WINDSHIELD WASHER NOZZLE WRENCH

This handy wrench fits all types of Trico Windshield Washer Nozzles. Use it to adjust position of water jet ... or to loosen jet for flushing or cleaning. Mail the coupon today.

LIMITED OFFER



**Ask for WA-355 E-Z-CLEAN
SOLVENT SPECIAL**

TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.

Gentlemen: Please mail me a Trico Windshield Washer Nozzle Wrench; Enclosed is 10 cents to cover postage and handling.

Dealer's Name _____

Street _____

City or Town _____

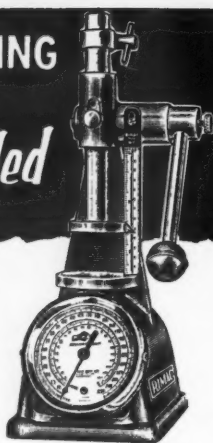
My Jobber's Name is _____

RIMAC SPRING TESTERS *Come Highly Recommended*

Manufacturers of automobiles, trucks and farm machinery have made Rimac Valve and Clutch Spring Testers standard plant equipment—recommend them for service and overhaul operations.

Etched metal scale at sides indicates exact length of spring; adjustable stop allows quick testing of an entire lot. Suitable for springs up to 2 inches diameter, 4½ inches length—capacity 0-250 lbs.

Ask your jobber or write for literature.

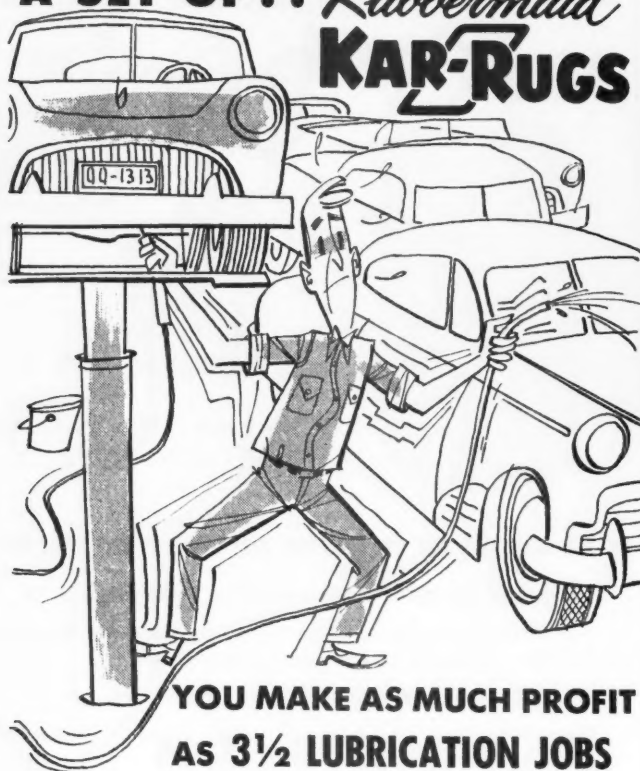


RINCK-McILWAINE

INC.

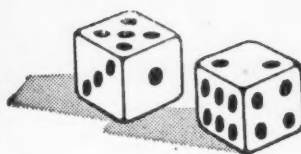
16 HUDSON STREET, NEW YORK 13, N. Y.

EVERY TIME YOU SELL A SET OF .. *Rubbermaid* KAR-RUGS



YOU MAKE AS MUCH PROFIT AS 3½ LUBRICATION JOBS OR 7½ CAR WASHES!

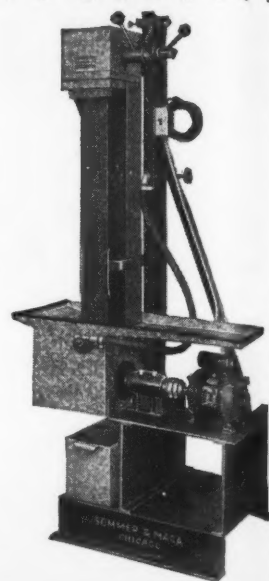
A "Natural" for AUTO GLASS Profit...



Increase your profits by doing your own grinding and finishing right in your own shop.

For the body shop doing glass installation, we recommend the SOMACA 106-FB12 machine. Designed to perform with entire satisfaction—built to withstand many years of continuous use. This machine carries the standard 106" Wet Abrasive Belt, Scientific Water Spray, Metal Cushioned Platen and "Quick-Acting" Locking Unit. Direct motor drive heavy duty ½ h.p., 110/220 volt motor.

Write for our new AUTO GLASS SUPPLY CATALOG No. 1252.



SOMMER & MACA Glass Machinery Co.

Automotive Department

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"Knock-Out" Valve Refacer

MODEL K403



SEE YOUR AUTHORIZED K. O. LEE DISTRIBUTOR OR WRITE FOR COMPLETE LITERATURE

features:

- Grinds wet or dry
- Valve stem range ¼" to 11/16" with three collets
- Five-inch grinding wheel
- Valve head capacity up to 3½", within valve stem range
- V-type table ways requiring no adjustment for wear
- Zero to 90° positive-stop face angle settings—with minus 1° for any angle
- Collet-type work head with controlled rpm's
- Concealed coolant system
- Right-hand table traverse arm
- Precision built for accuracy!

K. O. LEE COMPANY, ABERDEEN, SOUTH DAKOTA
WET VALVE REFACEERS • VALVE SEAT GRINDER SETS • VALVE SEAT INSERTS
RESEATER SETS • ROD ALIGNERS • STUD WRENCHES • DRILLS • SANDERS
POLISHERS • HAND GRINDER SETS • REAMER DRIVES • A. C. WELDERS

Get your **heap BIG bonus**

with new **WAUSAU** ^{*}**MONOTIZED** Oil-savr Rings!



HEAP BIG BONUS We believe it's the finest introductory plan ever offered . . . and we know you'll agree when you get all the facts for yourself. It's *the* truly outstanding, top-notch, profit-making bonus offer on piston rings!

HEAP BIG BONUS It's the kind of bonus offer that puts money in your pocket all the way down the line . . . from ring purchase to installation. No other ring manufacturer offers such a lucrative plan for big profits.

HEAP BIG BONUS It includes Wausau's famous Bonded Warranty protection for you plus a brand new consumer promotion campaign. The only one of its kind in the piston ring industry, Wausau's Bonded Warranty stands behind every installation of Wausau Piston Ring Sets . . . it protects you . . . it protects your customers.

HEAP BIG BONUS It's an opportunity you can't afford to miss. So don't delay. While it's fresh in your mind, write Wausau today for complete information. Prove to yourself this introductory offer is the most profitable one you've ever had!

WAUSAU

WAUSAU MOTOR PARTS COMPANY
Wausau, Wisconsin



Get This Handy New

HOYT BATTERY CONDITION TESTER

for 3-Way Tests on
BOTH 6V and 12V
Batteries

1. Load Method
2. No-Load Method
3. Voltage Regulator Setting

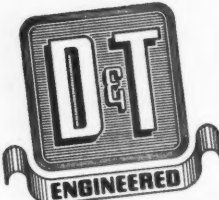
This new HOYT Battery Condition Tester, No. 638, is a sensitive, accurate Voltmeter with a double Prod connected to the Meter by a self-coiling, rubber insulated wire. Doubly useful because of its versatility and convenient size, the Meter has an expanded scale with clearly defined color blocks for quick, easy reading. Gold color, permanent finish—Hoyt's 50th Anniversary Model!

Send for FREE copy of "Meters and Motors" . . . valuable, practical suggestions for testing all automotive electrical systems.

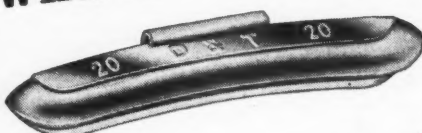


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Sole Selling Agents: Hoyt Electrical Instrument Works
42 CARLETON STREET, CAMBRIDGE 42, MASS.



WHEEL WEIGHTS




"The Quality Line"

A TYPE and SIZE for EVERY APPLICATION
SEE YOUR JOBBER OR WRITE FOR CATALOG

TURNER Manufacturing Co.

KOKOMO, INDIANA, U.S.A.



MOTOR AGE

Subscription

Renewal Percentage

Is Higher Than

That of Any Other

MONTHLY

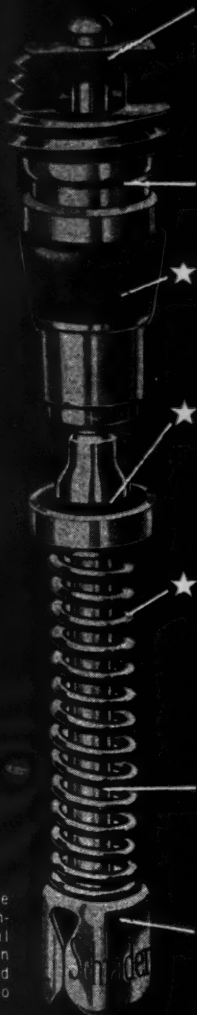
AUTOMOTIVE

SERVICE

MAGAZINE



Schrader
#4000
Valve Core



STURDIEST BRIDGE resists damage from screwdriver tools when tightening or removing.

STRONGEST SWIVEL JOINT will not separate when removing core.

IMPROVED PLUG GASKET—now withstands both extreme heat and cold. Wedge fit, will not distort.

SUPER SEALING SEAT—seals under higher tension—sure airtightness—finest heat and oil resisting rubber for longest service life.

NEW HIGHER TENSION Stainless Steel **SPRING** improves sealing—unaffected by heat. Spring-at-the-bottom provides obstruction-free air passage thru the top of the core.

FULL LENGTH PLUNGER PIN—guided top and bottom. Greatest travel insures easy inflation.

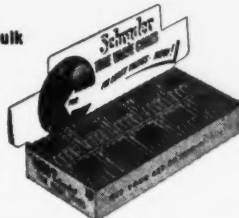
SPRING CUP—specially designed to align, anchor, make removal easiest.

*On long cores, the spring is never under tension until core is inserted in the valve. Then—and only then, it goes to work!

When you use and sell Schrader Valve Cores and Caps, you know your customers are getting the finest precision-made products at the vital points in their tires. They are the same Caps and Cores that Tire Manufacturers rely on—Schrader products that give greatest safety, plus quickest inflating, deflating and gauging.

Quality of product and service is your prime interest—look to Schrader for all your air service needs—gauges, valves, valve repair tools, airline fittings. Order Schrader products by name and be sure of the finest quality at the lowest possible cost.

Use caps and cores in bulk



... or display and sell 'em in sets of five

Schrader

REG. U. S. PAT. OFF.

FIRST NAME IN TIRE VALVES

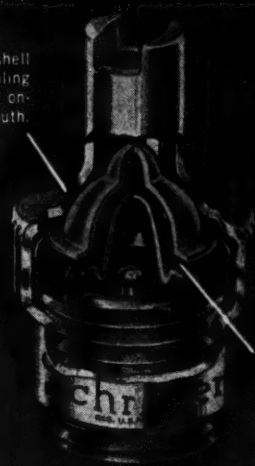
FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Your customers expect the Best from you

Use and Sell Finest *Quality* Schrader Valve Cores and Caps

Rugged brass shell
houses the sealing
unit and locks it on-
to the valve mouth.

Schrader
#880
Valve Cap



Tough specially com-
pounded rubber,
molded between two
brass plates—makes
a powerful seal over
valve mouth.

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Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, BROOKLYN 38, N. Y.

AC Spark Plug Div.....	18-19-27
Accurate Parts Mfg. Co.....	106
Air Express Div.....	71
American Chain & Cable Co...	80
Arco Company	133
Armstrong Rubber Co.....	131
Auto-Test, Inc.	138
Automotive Materials Corp...	111

Bay Mfg. Co.....	124
Bear Mfg. Co.....	109
Bendix Aviation Corp. (Products Div.)	24-25
Bernz Co., Inc., Otto.....	128
Binks Mfg. Co.....	125
Blackhawk Mfg. Co.....	69
Brand Names Foundation, Inc.	132
Bridgeport Thermostat Div...	90
Buick Motor Div.....	99
Burton-Rogers Co.	142

Campbell Chain Co.....	104
Car-Skin Products Corp.....	74
Champ-Items, Inc.	138
Champion Bronze Powder & Paint Co., Inc.....	120
Champion de Arment Tool Co.	126
Chevrolet Div.	75
Chicago Pneumatic Tool Co...	116
Chrysler Corp. (Parts Div.)..	107
Commercial Credit Corp.....	91
Country Gentleman	31
Cowles Magazines, Inc.....	114
Currier Co.	126
Curtis Pneumatic Machinery Div.	29

Delco-Remy Div.	8-9
De Soto Div. Chrysler Corp...	28
De Vilbiss Co.....	122-123
du Pont de Nemours Co., Inc.	17

Echlin Mfg. Co.....	70
Eis Automotive Corp.....	110
Electric Auto Lite Co.....	22-23
Ethyl Corp.	11

Farm Journal	103
Federal Mogul Service.....	6-127
Felt Products Mfg. Co.....	130
Fitzgerald Mfg. Co.....	67
Ford Motor Co.....	81
Fram Corp.	135
Fulton-Sylphon Div.	98

Index to Advertisers

This Advertisers' Index is published as a convenience, and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert



Gabriel Co.	86
General Electric Co.....	12
Globe Hoist Co.....	117
Grizzly Mfg. Co.....	136
Guaranteed Parts Co., Inc...	94

Hastings Mfg. Co.....	2nd Cover
Hein-Werner Corp.	119
Heller Bros. Co.....	124
Hollingshead Corp., R. M.	84-85-92-93

Hudson Div., American Motors	4
Huot Mfg. Co.....	128
Hyatt Bearings Div.....	87

Ideal Corp.	78
------------------	----

Johns-Manville	112-113
----------------------	---------

Ken Tool Mfg. Co.....	130
Kent-Moore Organization, Inc.	108
King Quality	118

Lasco Brake Products Corp..	128
Lee Co., K. O.....	140
Look Magazine	114

McQuay-Norris Mfg. Co.....	76-77
Manlev Div., American Chain & Cable Co.....	80
Maremont Automotive Products, Inc.	137
Mid Continent Petroleum Corp.	145

Moly Motor Products Corp...	102
Moog Industries, Inc.....	5
Motor Age	142

National Machine Works, Inc.	68
Neapco Products, Inc.....	100
New Britain Machine Co.....	13

Packard Electric Div.....	14-15
Perfect Circle Corp.....	65-101
Perfect Equipment Corp.....	88
Permatex Co., Inc.....	1
Proto Tools	2
Purolator Products, Inc.....	89

Quaker State Oil Refining Co.	115
-------------------------------	-----

Ramsey Corporation ...	3rd Cover
Raybestos Div., Raybestos-Manhattan, Inc.	10
Rinck-McIlwaine, Inc.	140
Robertshaw-Fulton Controls Co.	90-98
Rochester Products Div.....	121

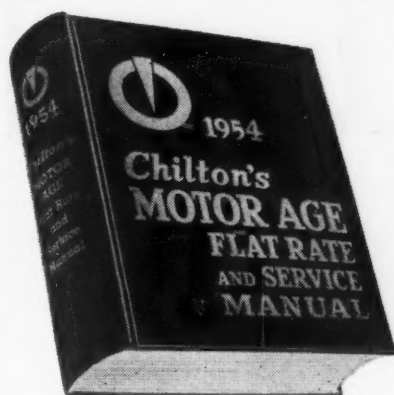
Schrader's Son Div., A....	138-143
Sealed Power Corp.....	32
Smart Tools Inc.....	145
Snap-on Tools Corp.....	97
Sommer & Maca Glass Machinery Co.	140
Southern Friction Material Co.	130
Sparks-Withington Co.	105
Standard Motor Products Inc.	30
Studebaker Corp.	63
Sunnen Products Co.....	130

Taylor Instrument Co.....	96
Thermoid Co.	Back Cover
Thomas Co., O. H.....	129
Timken Roller Bearing Co....	26
Trico Products Corp.....	139
Turner Mfg. Co.	142

United Motors Service Div...	72-73
United States Rubber Co....	83
United States Treasury Dept..	134

Walker Mfg. Co.....	20-21
Wausau Motor Parts Co....	141
Weatherhead Co.	95
Weller Electric Corp.....	82
Westinghouse Air Brake Co...	79
Willard Storage Battery Co.	16
Wiremold Co.	120
Wix Corporation	7
Wooster Rubber Co.....	140

GET YOURS!



Get your copy of the
1954-25th Edition of
CHILTON'S
MOTOR AGE
FLAT RATE and
SERVICE MANUAL

while the supply lasts

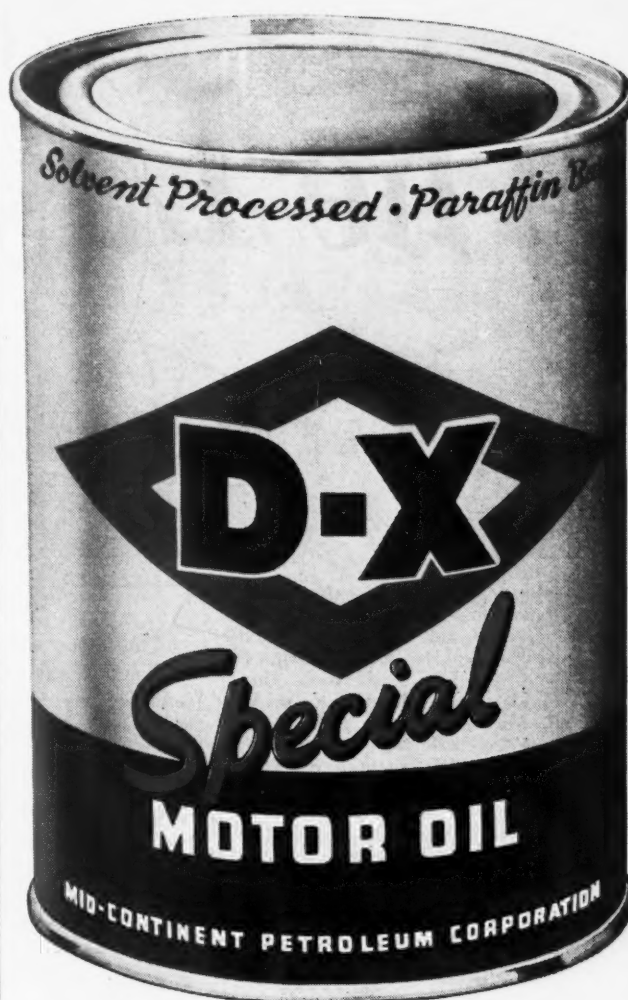
- Labor Charges and Service Procedures on the new cars
- The most complete and efficient edition Chilton has ever issued

12 issues of MOTOR AGE and the big 1800 page manual cost only \$17.00

AUTOMOTIVE HEADQUARTERS

CHILTON COMPANY

Philadelphia 39, Pa.



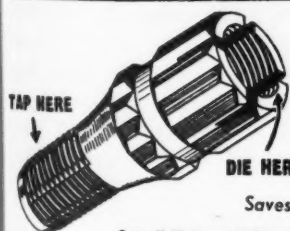
Special PROFIT, too

D-X *Special* 10W/30 (or 5W/20) Motor Oil is the perfect *finishing touch* that will make your repair jobs look even better! Its higher Viscosity Index gives it free-flowing characteristics that mean superior lubrication under all conditions, with less oil consumption—even in older cars! Its S-1 level of additive treatment protects against hydraulic valve lifter trouble, keeps engines cleaner.

But, D-X *Special* means *special* profit, too! It's no trick at all to sell more oil changes when you can offer customers better year-round lubrication, even in severest service, with D-X *Special*. And, repeat business is assured because customers stay sold on D-X *Special*!

We would like to tell you more about "Weather-Proofed" D-X *Special* Motor Oil—how it reduces your inventory, improves sales, protects cars in winter or summer, how it's literally four oils in one and sold with an unconditional money-back guarantee. Write us today.

MID-CONTINENT PETROLEUM CORPORATION
Tulsa, Oklahoma



Combination Tap & Die
THREAD CHASERS

Re-Threads DAMAGED or CROSS-THREADED fittings FAST on CARBURETORS, FUEL PUMPS, BRAKE, GAS AND OIL LINES.

Saves Time and Cost of New Fittings

Set # IF-1 consisting of 3 THREAD CHASERS **\$4.50**
to service all popular cars and trucks. Neatly boxed.

Other type CHASERS available to service AIR BRAKE, DIESEL, MARINE, OIL BURNER and REFRIGERATION fittings. See your tool supplier. If not available write to:

SMART-TOOLS, INC. Dept. "A," 62 Eagle St., Prov. 9, R. I.

The Last Laugh



The Mechanic called to the bartender, "Give this lady a drink." She ordered champagne. He took beer. There were several rounds of drinks and each time they both took the same. Finally, the Mechanic said, "You look like a real nice girl. How come you keep ordering champagne when you know it's so expensive?" She said, "When I drink champagne I have the same dream. I dream of a handsome man showering me with jewels and riches and carrying me off to a beautiful love nest. On the other hand, when I drink beer, all I do is burp."

Service Manager (to daughter): "Your young man called at my office today and asked for your hand in marriage. I consented."

Daughter: "But, Father, I hate to leave Mother."

Service Manager: "That's perfectly all right, my dear. Just take her with you."

Professor: "What is the principal contribution of the automobile age?"

Freshman: "Well, it practically stopped horse stealing."



The jobber salesman sought medical aid because he had popped eyes and ringing in his ears. The doctor took out his tonsils. No improvement. A second doctor suggested he have his teeth removed. He did; still no improvement.

A third doctor told him bluntly that he had only six months to live. The doomed salesman shrugged his shoulders, decided to make the best of his remaining days. He bought a flashy Caddy convertible, hired a chauffeur, had the best Fifth Avenue tailor make him a dozen suits, and decided to have his shirts hand made.

"Okay," said the shirtmaker. "Let's get your measurements. Hmm, 34 sleeve, 16 collar . . ."

"Fifteen collar," corrected the salesman.

"Sixteen," said the shirtmaker, rechecking the measurement.

"But I've always worn fifteen," the salesman insisted.

"Listen," the shirtmaker said, "I'm warning you. You keep on wearing a fifteen collar and your eyes will pop and you'll have a ringing in your ears."

Dopey Dinger: "My gal has two of the prettiest legs in the world."
Pat the Painter: "How do you know?"
Dopey Dinger: "I counted them."

First Mechanic: "Let's just have one more quick one and then I've got to go. By the way, what does your wife say when you stay out after twelve like this?"

Second Mechanic: "Nothing! I'm not married."

First Mechanic: "Then why do you stay out so late?"



"Charlie, last night at the party your sister promised to become my wife. Can you forgive me for taking her away?"

"Shucks, boy, no apologies are in order. That's what the party was for."

A man married a wealthy woman and retired. One day he and his wife were out walking when they passed two men who had known the husband. "There goes Frank," said one of the men, "with his labor-saving device."

Mechanic (on phone): "Doctor, please hurry over to my house as quickly as possible. My wife has appendicitis."

Doctor: "Nonsense! I took your wife's appendix out three years ago, and I never heard of anyone having a second appendix."

Mechanic: "Well, did you ever hear of anyone having a second wife?"

Maisy: "It's outrageous for that man to charge us \$10 to tow us three miles."

Daisy: "That's all right. He's earning it. I have the brakes on."

No more "average results" for me!

...my hat's off to

RAMCO *EXTRA* ENGINEERING



DOUBLE LIFE PRINCIPLE



1st Life: No inner-ring contact on steel ring.



2nd Life: Inner-ring contact on steel ring for stabilization.



You can really SEE what a difference ***EXTRA*** ENGINEERING makes!

Yes, you can really see the difference RAMCO ***EXTRA*** ENGINEERING makes, when you examine the steel "no gap" Spiro-Seal section of Ramco 10-Up ring sets. Here you have proof that Ramco's extra years of engineering specialization on re-powering really assure you of doing the job right every time!

It is this "no gap" Spiro-Seal, which requires no initial inner-ring pressure to contact the cylinder wall, that makes possible the famous Ramco-patented Double Life Principle, illustrated above. And it is this principle that makes the difference between average chrome ring or steel ring performance and the QUICKER SEATING, LESS

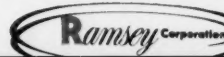
... and what a difference ***EXTRA*** ENGINEERING makes at the cash register!

PRESSURE ACTION of Ramco regular or chrome plated oil rings.

With the Ramco Double Life Principle, you use the cast-iron ring for *immediate seating* and *immediate oil control*! And you get these advantages because Ramco cast-iron oil and compression rings employ graphite and pearlite to lubricate and mate to the cylinder wall. Thus, the steel or chrome plated Spiro-Seal section is allowed to seat gradually under its own inherent spring tension without any pressure assistance from the spring inner-ring! No wonder experienced mechanics say: "My hat's off to RAMCO ***EXTRA*** ENGINEERING!"

You Profit All-Ways with **RAMCO 10_{up}** Piston Rings

...they're extra-engineered!

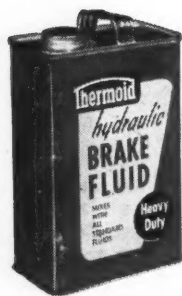


St. Louis 8, Missouri,
A subsidiary of

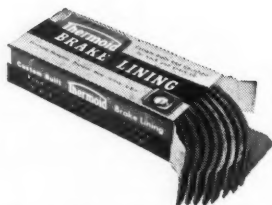
**"Give your customers
a good brake"**



Thermoid—brake specialists for over 50 years—supplies a complete line of Hydraulic Brake Parts, precision engineered to industry-leading standards. Always use genuine Thermoid Hydraulic Brake Cylinder Assemblies for complete replacement, or Thermoid Repair Kits and parts for precision brake service. Call your jobber.



Thermoid Hydraulic Brake Fluids, "A" and "HD" types, contain corrosion inhibitors . . . mix with any quality fluid . . . meet or exceed SAE specifications.



Thermoid "Custom-Built" Brake Linings: "Custom-Built" for power brakes and automatic transmissions. The only brake linings approved by the Pittsburgh Testing Laboratories.

Thermoid

Thermoid Company • Trenton, New Jersey

the standard of precision processing in brake lining, brake blocks, hydraulic fluid, cylinder assemblies, hydraulic brake parts.